

 **ANALYTICAL REPORT****PREPARED FOR**

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AECOM

1001 Bishop Street  
Honolulu HI 96813

Generated 8/14/2023 9:52 AM

**JOB DESCRIPTION**

Red Hill - AFFF Assessment Sampling

**JOB NUMBER**

580-130241-1

# Eurofins Seattle

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

## Authorization



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# Definitions/Glossary

Client: AECOM  
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-130241-1

## Qualifiers

### GC Semi VOA

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

## CASE NARRATIVE

Client: AECOM

Project: Red Hill - AFFF Assessment Sampling  
Report Number: 580-130241-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### RECEIPT

Six samples were received on 8/4/2023 3:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.3° C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

### GLYCOLS

Samples AF-RHMW02-WGN01LF-2308 (580-130241-1), AF-RHMW02-WGFD01LF-2308 (580-130241-2), AF-RHMW03-WGN01LF-2308 (580-130241-3), AF-RHMW12A-WGN01LF-2308 (580-130241-4), AF-RHMW12A-WGFD01LF-2308 (580-130241-5) and AF-RHMW16-WGN01LF-2308 (580-130241-6) were analyzed for glycols in accordance with EPA SW-846 Method 8015B - DAI. The samples were analyzed on 08/10/2023.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: AECOM  
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-130241-1

**Client Sample ID: AF-RHMW02-WGN01LF-2308**

**Lab Sample ID: 580-130241-1**

No Detections.

**Client Sample ID: AF-RHMW02-WGFD01LF-2308**

**Lab Sample ID: 580-130241-2**

No Detections.

**Client Sample ID: AF-RHMW03-WGN01LF-2308**

**Lab Sample ID: 580-130241-3**

No Detections.

**Client Sample ID: AF-RHMW12A-WGN01LF-2308**

**Lab Sample ID: 580-130241-4**

No Detections.

**Client Sample ID: AF-RHMW12A-WGFD01LF-2308**

**Lab Sample ID: 580-130241-5**

No Detections.

**Client Sample ID: AF-RHMW16-WGN01LF-2308**

**Lab Sample ID: 580-130241-6**

No Detections.

This Detection Summary does not include radiochemical test results.

# Client Sample Results

Client: AECOM  
 Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-130241-1

**Client Sample ID: AF-RHMW02-WGN01LF-2308**

**Lab Sample ID: 580-130241-1**

Date Collected: 08/03/23 09:35

Matrix: Water

Date Received: 08/04/23 15:00

**Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	1.1	mg/L			08/10/23 18:56	1

**Client Sample ID: AF-RHMW02-WGFD01LF-2308**

**Lab Sample ID: 580-130241-2**

Date Collected: 08/03/23 09:35

Matrix: Water

Date Received: 08/04/23 15:00

**Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	1.1	mg/L			08/10/23 19:19	1

**Client Sample ID: AF-RHMW03-WGN01LF-2308**

**Lab Sample ID: 580-130241-3**

Date Collected: 08/03/23 11:20

Matrix: Water

Date Received: 08/04/23 15:00

**Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	1.1	mg/L			08/10/23 19:42	1

**Client Sample ID: AF-RHMW12A-WGN01LF-2308**

**Lab Sample ID: 580-130241-4**

Date Collected: 08/03/23 09:30

Matrix: Water

Date Received: 08/04/23 15:00

**Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	1.1	mg/L			08/10/23 20:05	1

**Client Sample ID: AF-RHMW12A-WGFD01LF-2308**

**Lab Sample ID: 580-130241-5**

Date Collected: 08/03/23 09:30

Matrix: Water

Date Received: 08/04/23 15:00

**Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	1.1	mg/L			08/10/23 20:28	1

**Client Sample ID: AF-RHMW16-WGN01LF-2308**

**Lab Sample ID: 580-130241-6**

Date Collected: 08/03/23 11:25

Matrix: Water

Date Received: 08/04/23 15:00

**Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	1.1	mg/L			08/10/23 20:51	1



# Default Detection Limits

Client: AECOM

Job ID: 580-130241-1

Project/Site: Red Hill - AFFF Assessment Sampling

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## Method: 8015C GLY - Glycols- Direct Injection (GC/FID)

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Analyte	LOQ	DL	Units
2-(2-Butoxyethoxy)ethanol	5.0	1.1	mg/L

# QC Sample Results

Client: AECOM  
 Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-130241-1

## Method: 8015C GLY - Glycols- Direct Injection (GC/FID)

**Lab Sample ID: MB 680-792737/9**  
**Matrix: Water**  
**Analysis Batch: 792737**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U M	5.0	1.1	mg/L			08/10/23 14:20	1

**Lab Sample ID: LCS 680-792737/5**  
**Matrix: Water**  
**Analysis Batch: 792737**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-(2-Butoxyethoxy)ethanol	20.0	19.6		mg/L		98	50 - 150

**Lab Sample ID: LCSD 680-792737/6**  
**Matrix: Water**  
**Analysis Batch: 792737**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol	20.0	21.2		mg/L		106	50 - 150	8	50

**Lab Sample ID: 580-130241-6 MS**  
**Matrix: Water**  
**Analysis Batch: 792737**

**Client Sample ID: AF-RHMW16-WGN01LF-2308**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2-(2-Butoxyethoxy)ethanol	3.0	U	20.0	23.1		mg/L		115	50 - 150

**Lab Sample ID: 580-130241-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 792737**

**Client Sample ID: AF-RHMW16-WGN01LF-2308**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol	3.0	U	20.0	25.1		mg/L		125	50 - 150	8	50

# QC Association Summary

Client: AECOM  
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-130241-1

## GC Semi VOA

### Analysis Batch: 792737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-130241-1	AF-RHMMW02-WGN01LF-2308	Total/NA	Water	8015C GLY	
580-130241-2	AF-RHMMW02-WGFD01LF-2308	Total/NA	Water	8015C GLY	
580-130241-3	AF-RHMMW03-WGN01LF-2308	Total/NA	Water	8015C GLY	
580-130241-4	AF-RHMMW12A-WGN01LF-2308	Total/NA	Water	8015C GLY	
580-130241-5	AF-RHMMW12A-WGFD01LF-2308	Total/NA	Water	8015C GLY	
580-130241-6	AF-RHMMW16-WGN01LF-2308	Total/NA	Water	8015C GLY	
MB 680-792737/9	Method Blank	Total/NA	Water	8015C GLY	
LCS 680-792737/5	Lab Control Sample	Total/NA	Water	8015C GLY	
LCSD 680-792737/6	Lab Control Sample Dup	Total/NA	Water	8015C GLY	
580-130241-6 MS	AF-RHMMW16-WGN01LF-2308	Total/NA	Water	8015C GLY	
580-130241-6 MSD	AF-RHMMW16-WGN01LF-2308	Total/NA	Water	8015C GLY	

# Lab Chronicle

Client: AECOM  
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-130241-1

**Client Sample ID: AF-RHMW02-WGN01LF-2308**

**Lab Sample ID: 580-130241-1**

Date Collected: 08/03/23 09:35

Matrix: Water

Date Received: 08/04/23 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	792737	DBM	EET SAV	08/10/23 18:56

**Client Sample ID: AF-RHMW02-WGFD01LF-2308**

**Lab Sample ID: 580-130241-2**

Date Collected: 08/03/23 09:35

Matrix: Water

Date Received: 08/04/23 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	792737	DBM	EET SAV	08/10/23 19:19

**Client Sample ID: AF-RHMW03-WGN01LF-2308**

**Lab Sample ID: 580-130241-3**

Date Collected: 08/03/23 11:20

Matrix: Water

Date Received: 08/04/23 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	792737	DBM	EET SAV	08/10/23 19:42

**Client Sample ID: AF-RHMW12A-WGN01LF-2308**

**Lab Sample ID: 580-130241-4**

Date Collected: 08/03/23 09:30

Matrix: Water

Date Received: 08/04/23 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	792737	DBM	EET SAV	08/10/23 20:05

**Client Sample ID: AF-RHMW12A-WGFD01LF-2308**

**Lab Sample ID: 580-130241-5**

Date Collected: 08/03/23 09:30

Matrix: Water

Date Received: 08/04/23 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	792737	DBM	EET SAV	08/10/23 20:28

**Client Sample ID: AF-RHMW16-WGN01LF-2308**

**Lab Sample ID: 580-130241-6**

Date Collected: 08/03/23 11:25

Matrix: Water

Date Received: 08/04/23 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	792737	DBM	EET SAV	08/10/23 20:51

**Laboratory References:**

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

# Accreditation/Certification Summary

Client: AECOM  
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-130241-1

## Laboratory: Eurofins Savannah

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015C GLY		Water	2-(2-Butoxyethoxy)ethanol

# Method Summary

Client: AECOM

Job ID: 580-130241-1

Project/Site: Red Hill - AFFF Assessment Sampling

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<b>Method</b>	<b>Method Description</b>	<b>Protocol</b>	<b>Laboratory</b>
8015C GLY	Glycols- Direct Injection (GC/FID)	SW846	EET SAV

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

# Sample Summary

Client: AECOM

Job ID: 580-130241-1

Project/Site: Red Hill - AFFF Assessment Sampling

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<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
580-130241-1	AF-RHMW02-WGN01LF-2308	Water	08/03/23 09:35	08/04/23 15:00
580-130241-2	AF-RHMW02-WGFD01LF-2308	Water	08/03/23 09:35	08/04/23 15:00
580-130241-3	AF-RHMW03-WGN01LF-2308	Water	08/03/23 11:20	08/04/23 15:00
580-130241-4	AF-RHMW12A-WGN01LF-2308	Water	08/03/23 09:30	08/04/23 15:00
580-130241-5	AF-RHMW12A-WGFD01LF-2308	Water	08/03/23 09:30	08/04/23 15:00
580-130241-6	AF-RHMW16-WGN01LF-2308	Water	08/03/23 11:25	08/04/23 15:00

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-130241-1

SDG No.: \_\_\_\_\_

Instrument ID: CVGG2 Analysis Batch Number: 788122

Lab Sample ID: IC 680-788122/4 Client Sample ID: \_\_\_\_\_

Date Analyzed: 07/13/23 12:19 Lab File ID: 1GG12004.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Triethylene Glycol	9.59	Shouldering	AR8P	07/13/23 19:26

Lab Sample ID: IC 680-788122/5 Client Sample ID: \_\_\_\_\_

Date Analyzed: 07/13/23 12:42 Lab File ID: 1GG12005.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Triethylene Glycol	9.59	Shouldering	AR8P	07/13/23 19:26

Lab Sample ID: IC 680-788122/6 Client Sample ID: \_\_\_\_\_

Date Analyzed: 07/13/23 13:05 Lab File ID: 1GG12006.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Triethylene Glycol	9.59	Shouldering	AR8P	07/13/23 19:26

Lab Sample ID: ICIS 680-788122/7 Client Sample ID: \_\_\_\_\_

Date Analyzed: 07/13/23 13:29 Lab File ID: 1GG12007.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Triethylene Glycol	9.59	Shouldering	AR8P	07/13/23 19:27

Lab Sample ID: IC 680-788122/8 Client Sample ID: \_\_\_\_\_

Date Analyzed: 07/13/23 13:52 Lab File ID: 1GG12008.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Triethylene Glycol	9.59	Shouldering	AR8P	07/13/23 19:25



GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-130241-1

SDG No.: \_\_\_\_\_

Instrument ID: CVGG2 Analysis Batch Number: 788122

Lab Sample ID: IC 680-788122/9 Client Sample ID: \_\_\_\_\_

Date Analyzed: 07/13/23 14:15 Lab File ID: 1GG12009.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Triethylene Glycol	9.59	Shouldering	AR8P	07/13/23 19:25

Lab Sample ID: IC 680-788122/10 Client Sample ID: \_\_\_\_\_

Date Analyzed: 07/13/23 14:38 Lab File ID: 1GG12010.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Triethylene Glycol	9.59	Shouldering	AR8P	07/13/23 19:24

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-130241-1

SDG No.: \_\_\_\_\_

Instrument ID: CVGG2 Analysis Batch Number: 792737

Lab Sample ID: MB 680-792737/9 Client Sample ID: \_\_\_\_\_

Date Analyzed: 08/10/23 14:20 Lab File ID: 1GH10009.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-(2-Butoxyethoxy)ethanol		Invalid Compound ID	AR8P	08/10/23 21:35

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-130241-1

SDG No.: \_\_\_\_\_

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
SG_Gly_CAL_00053	12/27/23		o2si, Lot 480919			(Purchased Reagent)	2,2'-Oxybisethanol	2000 ug/mL
							2-(2-Butoxyethoxy)ethanol	2000 ug/mL
							2-Butoxyethanol	2000 ug/mL
							4-Hydroxy-4-methyl-2-pentanone	2000 ug/mL
							Dipropylene Glycol Methyl Ether	2000 ug/mL
							Ethanol, 2-propoxy	2000 ug/mL
							Ethylene glycol	2000 ug/mL
							Propylene glycol	2000 ug/mL
SG_GLY_ISTD_00124	01/12/24		Agilent, Lot 0006738806			(Purchased Reagent)	n-Heptyl Alcohol	5000 ug/mL
SG_GLY_ISTD_00127	02/10/24		Agilent, Lot 0006738806			(Purchased Reagent)	n-Heptyl Alcohol	5000 ug/mL
SG_GlyICV_00061	08/01/23		o2si, Lot 454407			(Purchased Reagent)	2-(2-Butoxyethoxy)ethanol	2000 ug/mL

Reagent

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**SG\_Gly\_CAL\_00053**



ISO/IEC 17025 Accredited  
Chemical Testing Lab  
Cert. No. 3031.01



ISO 17034 Accredited  
Reference Material Producer  
Cert. No. 3031.02

Rev 0

## Certificate of Analysis

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Catalog No.	Lot No.	Storage	Solvent	Date Received	Exp. Date
G34-120070-04	480919	≤ -10 °C	P/T Methanol		2-May-2024

**Description:**

ISO 17034 -Custom Volatiles Mix,105-12, 2000 & 4,000 mg/L, 1 mL

**Container:**

1 ml Ampule, Amber Glass

### Certified Values:

The certified value is based on gravimetric and volumetric preparation of this Certified Reference Material (CRM). This CRM has been confirmed by GC/MS, GC, HPLC, UPLC/HRAM-MS, UV/VIS, Enzymatic, and/or wet chemistry techniques using internally developed method(s) against independent source(s). The uncertainty value is calculated for a 95% confidence interval with a *k* value of 2. The purity of neat materials not traceable to an ISO 17034:2016 accredited Reference Material Provider is traceable to internal analysis by GC, GC/MS, HPLC, Enzymatic, or wet chemistry techniques and compared to a National Metrological Institute such as NIST where feasible.

Compound	CAS No.	Purity (%)	Neat Material Lot No.	Concentration
2-butoxyethanol	111-76-2	99.6	311.9.2P	1986 ± 100 mg/L
diethylene glycol butyl ether	112-34-5	99.8	2323.7.2P	2008 ± 100 mg/L
propyl cellosolve	2807-30-9	99.9	1570.7.2P	1980 ± 100 mg/L
dipropylene glycol monomethyl ether	34590-94-8	99.7	2333.7.2P	2014 ± 100 mg/L
ethylene glycol	107-21-1	100	307.201.1P	1968 ± 99 mg/L
di(ethylene glycol)	111-46-6	99.5	309.7.2P	1994 ± 100 mg/L
tri(ethylene glycol)	112-27-6	99.9	310.7.2.1.1P	1974 ± 110 mg/L
4-Hydroxy-4-methyl-2-pentanone	123-42-2	98	2334.286.1P	1991 ± 110 mg/L
1,2-propanediol	57-55-6	99.5	306.9.3P	1998 ± 100 mg/L
tetraethylene glycol	112-60-7	98	3754.7.1P	3959 ± 200 mg/L

### Intended Uses:

This CRM is intended for use as a calibration standard or a quality control standard for chromatography equipment such as GC, GC/MS, HPLC, and HPLC/MS. It may also be used for various USEPA, NIOSH and ASTM methods.

Recommended storage container for ampuled products after opening is a 12 mm x 32 mm amber vial with screw cap Teflon lined silicon septum. The modeled % change per day can be calculated using the following:

# Certificate of Analysis

Page 2 of 3

Catalog No. G34-120070-04

Lot No. 480919

Expiration Date 2 -May-2024

$$\% \text{ Change} = 116192x^{-2.578} + 40.383e^{-0.03y}$$

where x = boiling point of the most volatile analyte in the mix (in degrees K)

y = boiling point of the solvent (in degrees K)

This model assumes the container is stored at -10 °C and is unopened during storage. The user should determine what the acceptable error for their process is and calculate the maximum number of days the opened ampule should be stored.

## Method of Preparation:

This standard was prepared gravimetrically using balances calibrated with National Institute of Standards and Technology (NIST) traceable weights (NIST Test Numbers 822/273070-06, 822/275141-07, 822/278993-10). Only calibrated Class A volumetric glassware and/or calibrated syringes were used to prepare this standard. Raw materials may have been checked for stoichiometry and purity prior to use. This standard has been analyzed against an independent source.

## Packaging and Storage:

The solution should be stored according to the following storage requirements:  $\leq -10$  °C

Once the product is opened, it should be transferred to a vial with minimum head space if the product was received in a sealed ampule.

## Glassware Calibration:

Only Class A glassware and/or calibrated syringes are used in the manufacture and quality control of standards. All glassware is calibrated using NIST traceable weights.

## Weights and Balance Calibration:

Weights used to perform daily checks on balances are calibrated annually by the State of South Carolina Department of Agriculture Metrology Laboratory and are traceable to NIST. Balances are checked daily in accordance to procedure O2-LB-G-002. Balances are calibrated annually by an ISO/IEC 17025:2017 accredited metrology service.

## Homogeneity:

Homogeneity has been established in accordance with internal procedure O2-QS-011 and has a maximum uncertainty of 0.1%. This is consistent with the intended use of this CRM. The homogeneity of this product has been confirmed by procedures consistent with ISO/IEC 17025:2017 and ISO 17034:2016. The homogeneity of this CRM is valid for sample sub-sizes that the end user can quantitatively reproduce.

## Hazardous Information:

Refer to MSDS.

## Calculation of Uncertainty:

The following equations are used to calculate the value of the expanded uncertainty:

$u = ku_c$  u = Expanded Uncertainty, k = the coverage factor at the 95% confidence level, k = 2,  $u_c$  = the combined uncertainty

$u_c = (u_{\text{char}}^2 + u_{\text{tran}}^2 + u_{\text{homo}}^2 + u_{\text{ls}}^2)^{1/2}$  where  $u_i$  are the individual uncertainty components for manufacturing, transportation, homogeneity, and shelf life. While no significant uncertainty was detected in the replicates, a minimum contribution to

Manufactured By:

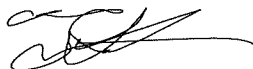


Brian Stokes

3 -May-2022

Production Chemist I

Certified By:



Tyler Sherman

14 -Jun-2022

Quality Control Chemist I

Released By:



Susan Mathews

14 -Jun-2022

Quality Control Team Lead

7290B Investment Drive • North Charleston, SC 29418  
Phone: 866.272.0932 • Fax: 866.509.5146 www.o2si.com

# Certificate of Analysis

Catalog No. G34-120070-04

Lot No. 480919

Expiration Date 2 -May-2024

uncertainty was added for homogeneity and long term stability as described in ISO Guide 35:2017.

## Expiration Information:

The stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. These tests include the effect of temperature and packaging on the product. Studies on the short term instability have determined no contribution to instability as observed on the concentration under controlled transportation conditions. This standard is guaranteed until 2-May-2024

## Quality Standard Documentation:

- ISO/IEC 17025:2017 "General Requirements for the Competence of Testing and Calibration" - Chemical Testing - Accredited A2LA Certificate Number 3031.01
- ISO 17034:2016 "General Requirements for the Competence of Reference Material Producers" - Reference Material Production - Accredited A2LA Certificate Number 3031.02

Manufactured By:



Brian Stokes

3 -May-2022

Production Chemist I

Certified By:



Tyler Sherman

14 -Jun-2022

Quality Control Chemist I

7290B Investment Drive • North Charleston, SC 29418  
Phone: 866.272.0932 • Fax: 866.509.5146 www.o2si.com

Released By:



Susan Mathews

14 -Jun-2022

Quality Control Team Lead

Reagent

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**SG\_GLY\_ISTD\_00124**



**Reference Material Certificate  
Product Information Sheet**

**Product Name:** Custom Standard

**Lot Number:** 0006738806

**Product Number:** CUS-6046

**Lot Issue Date:** 05-Apr-2023

**Storage Conditions:** Store at Room Temperature (15° to 30°C).

**Expiration Date:** 31-May-2025

Component Name	Concentration	Uncertainty	CAS#	Analyte Lot
n-heptanol	5008	± 25 µg/mL	000111-70-6	RM04540

**Matrix:** methanol (methyl alcohol)

**Description:**

This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material (RM) standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above. Purity values are taken from approved vendor raw material certificates.

**Traceability:**

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCCL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

**Homogeneity:**

This analytical reference (RM) standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

**Instructions for Use:**

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

**Safety:**

Refer to the Safety Data Sheet on [www.agilent.com](http://www.agilent.com) for information regarding this analytical reference material.

**Intended Use:**

This analytical reference (RM) standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

**Expiration of Certification:**

The certification of this analytical reference standard (RM) is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.



**Maintenance of Certification:**

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.



**Sample lot approver:**

Monica Bourgeois  
QMS Representative



ISO 17034 Cert  
No. AR-1936

RM was produced in accordance with the TUV/SUD registered ISO  
9001:2015 Quality Management System. Cert# 951215321

Page: 2 of 2

[www.agilent.com/quality/](http://www.agilent.com/quality/)  
CSD-QA-015.1

ISO 17025

Reagent

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**SG\_GLY\_ISTD\_00127**

**Reference Material Certificate  
Product Information Sheet**

**Product Name:** Custom Standard

**Lot Number:** 0006738806

**Product Number:** CUS-6046

**Lot Issue Date:** 05-Apr-2023

**Storage Conditions:** Store at Room Temperature (15° to 30°C).

**Expiration Date:** 31-May-2025

Component Name	Concentration	Uncertainty	CAS#	Analyte Lot
n-heptanol	5008	± 25 µg/mL	000111-70-6	RM04540

**Matrix:** methanol (methyl alcohol)

**Description:**

This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material (RM) standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above. Purity values are taken from approved vendor raw material certificates.

**Traceability:**

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCCL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

**Homogeneity:**

This analytical reference (RM) standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

**Instructions for Use:**

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

**Safety:**

Refer to the Safety Data Sheet on [www.agilent.com](http://www.agilent.com) for information regarding this analytical reference material.

**Intended Use:**

This analytical reference (RM) standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

**Expiration of Certification:**

The certification of this analytical reference standard (RM) is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.



**Maintenance of Certification:**

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.



**Sample lot approver:**

Monica Bourgeois  
QMS Representative



ISO 17034 Cert  
No. AR-1936

RM was produced in accordance with the TUV/SUD registered ISO 9001:2015 Quality Management System. Cert# 951215321

Page: 2 of 2

[www.agilent.com/quality/](http://www.agilent.com/quality/)  
CSD-QA-015.1

ISO 17025

# Method 8015C - DAI Glycols

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Glycols -Direct Injection (GC/FID) -  
Method 8015C

FORM III  
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: 1GH10005.D  
 Lab ID: LCS 680-792737/5 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy) ethanol	20.0	19.6	98	50-150	

# Column to be used to flag recovery and RPD values  
 FORM III 8015C GLY

FORM III  
GC SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: 1GH10006.D  
 Lab ID: LCSD 680-792737/6 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
2-(2-Butoxyethoxy) ethanol	20.0	21.2	106	8	50	50-150	

# Column to be used to flag recovery and RPD values  
 FORM III 8015C GLY



FORM III  
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: 1GH10023.D  
 Lab ID: 580-130241-6 MS Client ID: AF-RHMW16-WGN01LF-2308 MS

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy) ethanol	20.0	3.0 U	23.1	115	50-150	

# Column to be used to flag recovery and RPD values  
 FORM III 8015C GLY

FORM III  
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: 1GH10024.D  
 Lab ID: 580-130241-6 MSD Client ID: AF-RHMW16-WGN01LF-2308 MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
2-(2-Butoxyethoxy) ethanol	20.0	25.1	125	8	50	50-150	

# Column to be used to flag recovery and RPD values  
 FORM III 8015C GLY

FORM IV  
GC SEMI VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: MB 680-792737/9  
 Matrix: Water Date Extracted: \_\_\_\_\_  
 Lab File ID: (1) 1GH10009.D Lab File ID: (2) \_\_\_\_\_  
 Date Analyzed: (1) 08/10/2023 14:20 Date Analyzed: (2) \_\_\_\_\_  
 Instrument ID: (1) CVGG2 Instrument ID: (2) \_\_\_\_\_  
 GC Column: (1) J&W DB WAX ID: 0.45 (mm) GC Column: (2) \_\_\_\_\_ ID: \_\_\_\_\_

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 680-792737/5	08/10/2023 12:47	
	LCSD 680-792737/6	08/10/2023 13:10	
AF-RHMW02-WGN01LF-2308	580-130241-1	08/10/2023 18:56	
AF-RHMW02-WGFD01LF-2308	580-130241-2	08/10/2023 19:19	
AF-RHMW03-WGN01LF-2308	580-130241-3	08/10/2023 19:42	
AF-RHMW12A-WGN01LF-2308	580-130241-4	08/10/2023 20:05	
AF-RHMW12A-WGFD01LF-2308	580-130241-5	08/10/2023 20:28	
AF-RHMW16-WGN01LF-2308	580-130241-6	08/10/2023 20:51	
AF-RHMW16-WGN01LF-2308 MS	580-130241-6 MS	08/10/2023 22:00	
AF-RHMW16-WGN01LF-2308 MSD	580-130241-6 MSD	08/10/2023 22:23	

FORM VIII  
GC SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: ICIS 680-788122/7 Date Analyzed: 07/13/2023 13:29  
 Instrument ID: CVGG2 GC Column: J&W DB WAX ID: 0.45 (mm)  
 Lab File ID (Standard): 1GG12007.D Heated Purge: (Y/N) N  
 Calibration ID: 91431

	nHPA		#	RT #	#	RT #
	AREA #	RT #				
INITIAL CALIBRATION MID-POINT	4734661	2.44				
UPPER LIMIT	9469322	2.94				
LOWER LIMIT	2367331	1.94				
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 680-788122/11 CCV		3971826	2.44			

nHPA = n-Heptyl Alcohol

Area Limit = 50%-200% of internal standard area  
 RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII  
GC SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 680-792737/4 Date Analyzed: 08/10/2023 12:24  
 Instrument ID: CVGG2 GC Column: J&W DB WAX ID: 0.45 (mm)  
 Lab File ID (Standard): 1GH10004.D Heated Purge: (Y/N) N  
 Calibration ID: 91431

		nHPA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		3519426	2.41				
UPPER LIMIT		7038852	2.91				
LOWER LIMIT		1759713	1.91				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 680-792737/5		3539575	2.40				
LCSD 680-792737/6		4128287	2.40				
MB 680-792737/9		4856997	2.39				
580-130241-1	AF-RHMW02-WGN01LF-2308	2755427	2.39				
580-130241-2	AF-RHMW02-WGFD01LF-2308	4005780	2.39				
580-130241-3	AF-RHMW03-WGN01LF-2308	3016039	2.39				
580-130241-4	AF-RHMW12A-WGN01LF-2308	3528344	2.39				
580-130241-5	AF-RHMW12A-WGFD01LF-2308	2804208	2.39				
580-130241-6	AF-RHMW16-WGN01LF-2308	3726891	2.39				
580-130241-6 MS	AF-RHMW16-WGN01LF-2308 MS	4042416	2.40				
580-130241-6 MSD	AF-RHMW16-WGN01LF-2308 MSD	3568585	2.39				
CCV 680-792737/26		4216152	2.40				

nHPA = n-Heptyl Alcohol

Area Limit = 50%-200% of internal standard area  
 RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AF-RHMW02-WGN01LF-2308 Lab Sample ID: 580-130241-1  
 Matrix: Water Lab File ID: 1GH10015.D  
 Analysis Method: 8015C GLY Date Collected: 08/03/2023 09:35  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 08/10/2023 18:56  
 Con. Extract Vol.: 1(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 792737 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	3.0	1.1

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10015.D  
 Lims ID: 580-130241-A-1  
 Client ID: AF-RHMW02-WGN01LF-2308  
 Sample Type: Client  
 Inject. Date: 10-Aug-2023 18:56:24 ALS Bottle#: 0 Worklist Smp#: 15  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0088172-015  
 Operator ID: Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 10-Aug-2023 23:22:06 Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1650

First Level Reviewer: AR8P Date: 10-Aug-2023 21:37:08

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
--------------	------------------	------------------	----------	--------------------	-------

\* 4 n-Heptyl Alcohol  
 2.385 2.405 -0.020 2755427 50.0

**QC Flag Legend**

Processing Flags

**Reagents:**

SG\_GLY\_ISTD\_00127 Amount Added: 10.00 Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10015.D

Injection Date: 10-Aug-2023 18:56:24

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-130241-A-1

Lab Sample ID: 680-130241-1

Worklist Smp#: 15

Client ID: AF-RHMW02-WGN01LF-2308

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

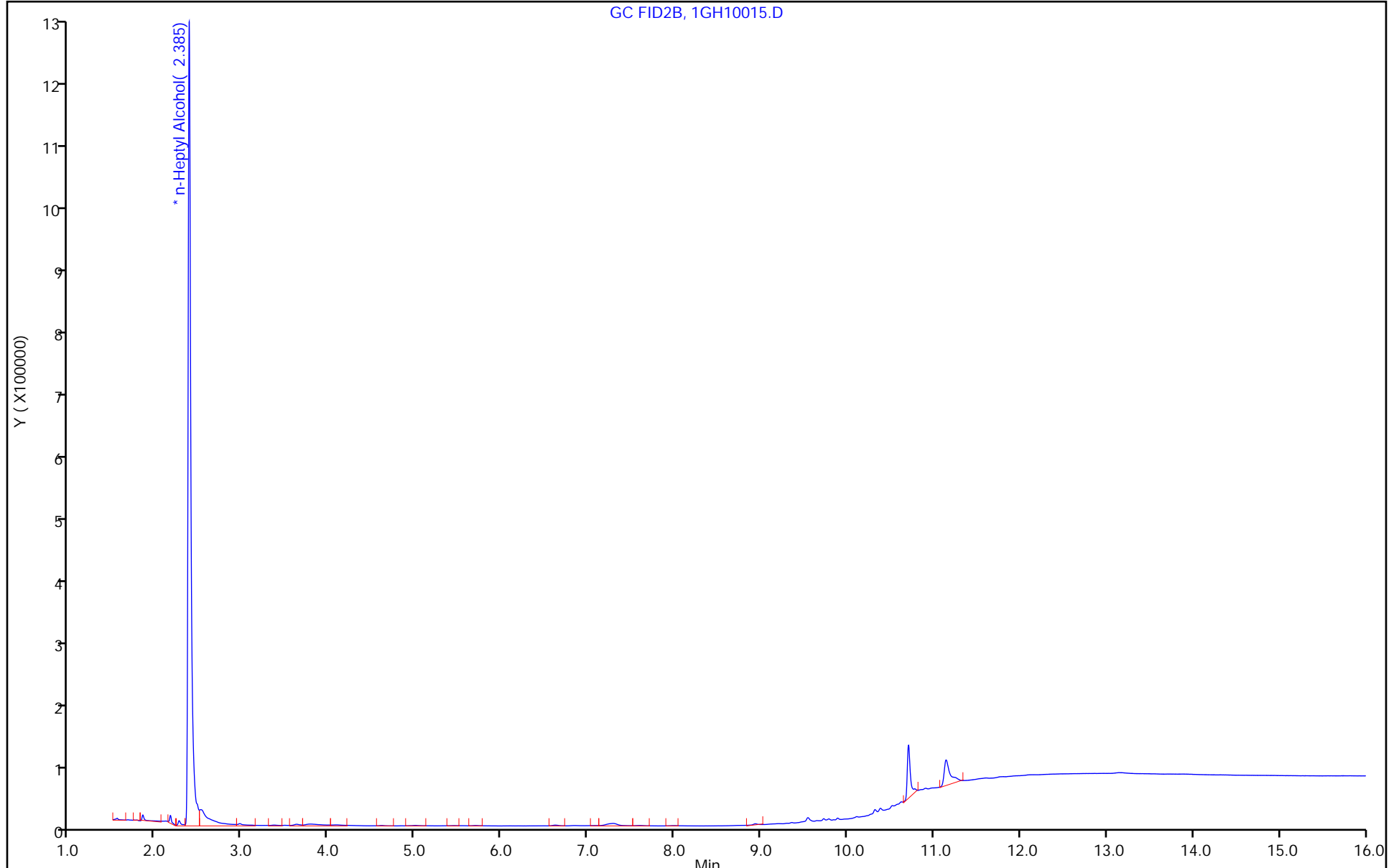
ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1GH10015.D





FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AF-RHMW02-WGFD01LF-2308 Lab Sample ID: 580-130241-2  
 Matrix: Water Lab File ID: 1GH10016.D  
 Analysis Method: 8015C GLY Date Collected: 08/03/2023 09:35  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 08/10/2023 19:19  
 Con. Extract Vol.: 1(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 792737 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	3.0	1.1

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10016.D  
 Lims ID: 580-130241-C-2  
 Client ID: AF-RHMW02-WGFD01LF-2308  
 Sample Type: Client  
 Inject. Date: 10-Aug-2023 19:19:32      ALS Bottle#: 0      Worklist Smp#: 16  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 680-0088172-016  
 Operator ID:      Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 10-Aug-2023 23:22:06      Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm)      Det: GC FID2B  
 Process Host: CTX1650

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
--------------	------------------	------------------	----------	--------------------	-------

\* 4 n-Heptyl Alcohol  
 2.393    2.405    -0.012    4005780    50.0

**Reagents:**

SG\_GLY\_ISTD\_00127      Amount Added: 10.00      Units: uL      Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10016.D

Injection Date: 10-Aug-2023 19:19:32

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-130241-C-2

Lab Sample ID: 680-130241-2

Worklist Smp#: 16

Client ID: AF-RHMW02-WGFD01LF-2308

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

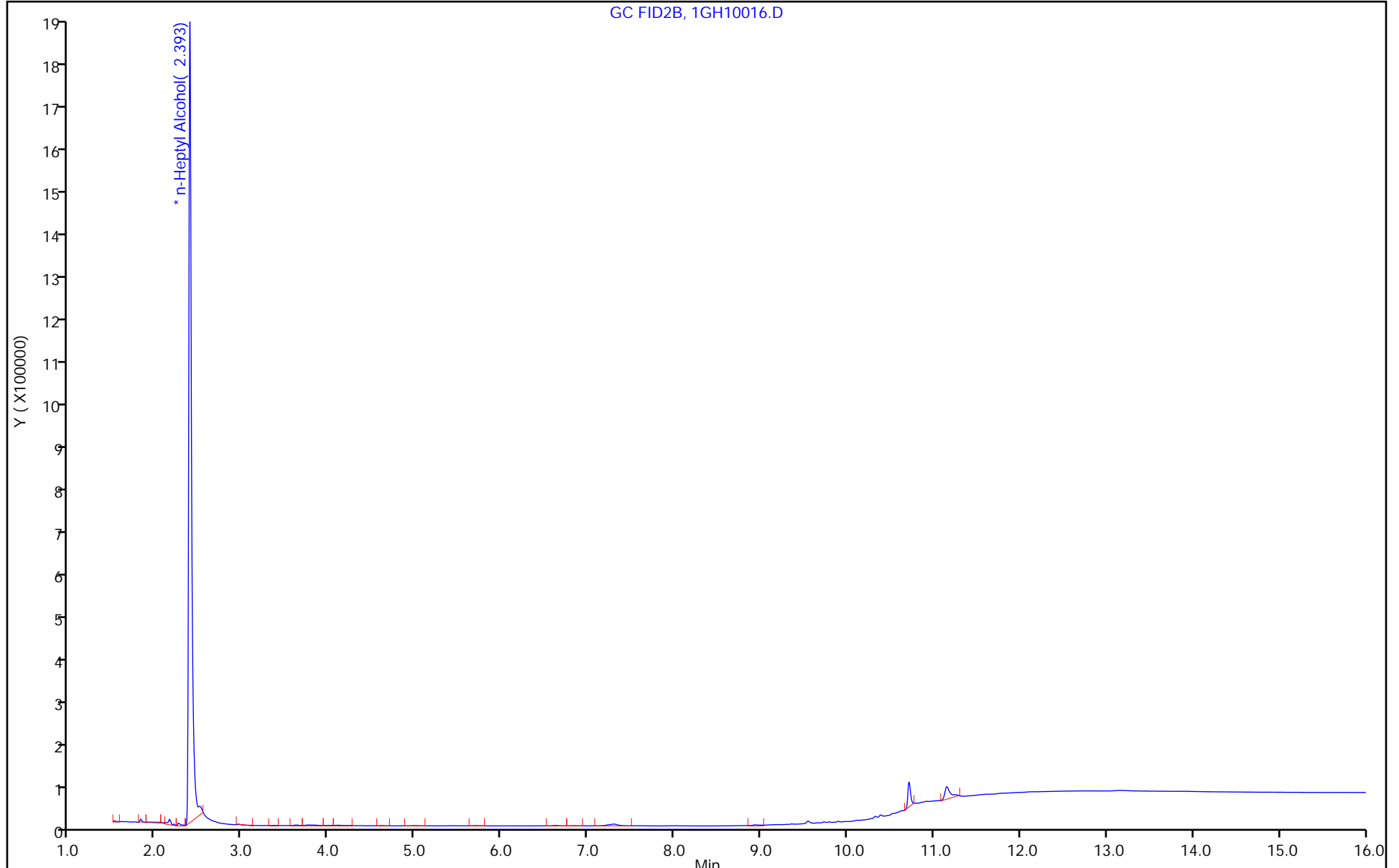
ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1GH10016.D



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AF-RHMW03-WGN01LF-2308 Lab Sample ID: 580-130241-3  
 Matrix: Water Lab File ID: 1GH10017.D  
 Analysis Method: 8015C GLY Date Collected: 08/03/2023 11:20  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 08/10/2023 19:42  
 Con. Extract Vol.: 1(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 792737 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	3.0	1.1

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10017.D  
 Lims ID: 580-130241-B-3  
 Client ID: AF-RHMW03-WGN01LF-2308  
 Sample Type: Client  
 Inject. Date: 10-Aug-2023 19:42:32      ALS Bottle#: 0      Worklist Smp#: 17  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 680-0088172-017  
 Operator ID:      Instrument ID: CVGG2  
  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 10-Aug-2023 23:22:06      Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
  
 Column 1 : J&W DB WAX ( 0.45 mm)      Det: GC FID2B  
 Process Host: CTX1650

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
--------------	------------------	------------------	----------	--------------------	-------

\* 4 n-Heptyl Alcohol  
 2.388    2.405    -0.017    3016039    50.0

**Reagents:**

SG\_GLY\_ISTD\_00127      Amount Added: 10.00      Units: uL      Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10017.D

Injection Date: 10-Aug-2023 19:42:32

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-130241-B-3

Lab Sample ID: 680-130241-3

Worklist Smp#: 17

Client ID: AF-RHMW03-WGN01LF-2308

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

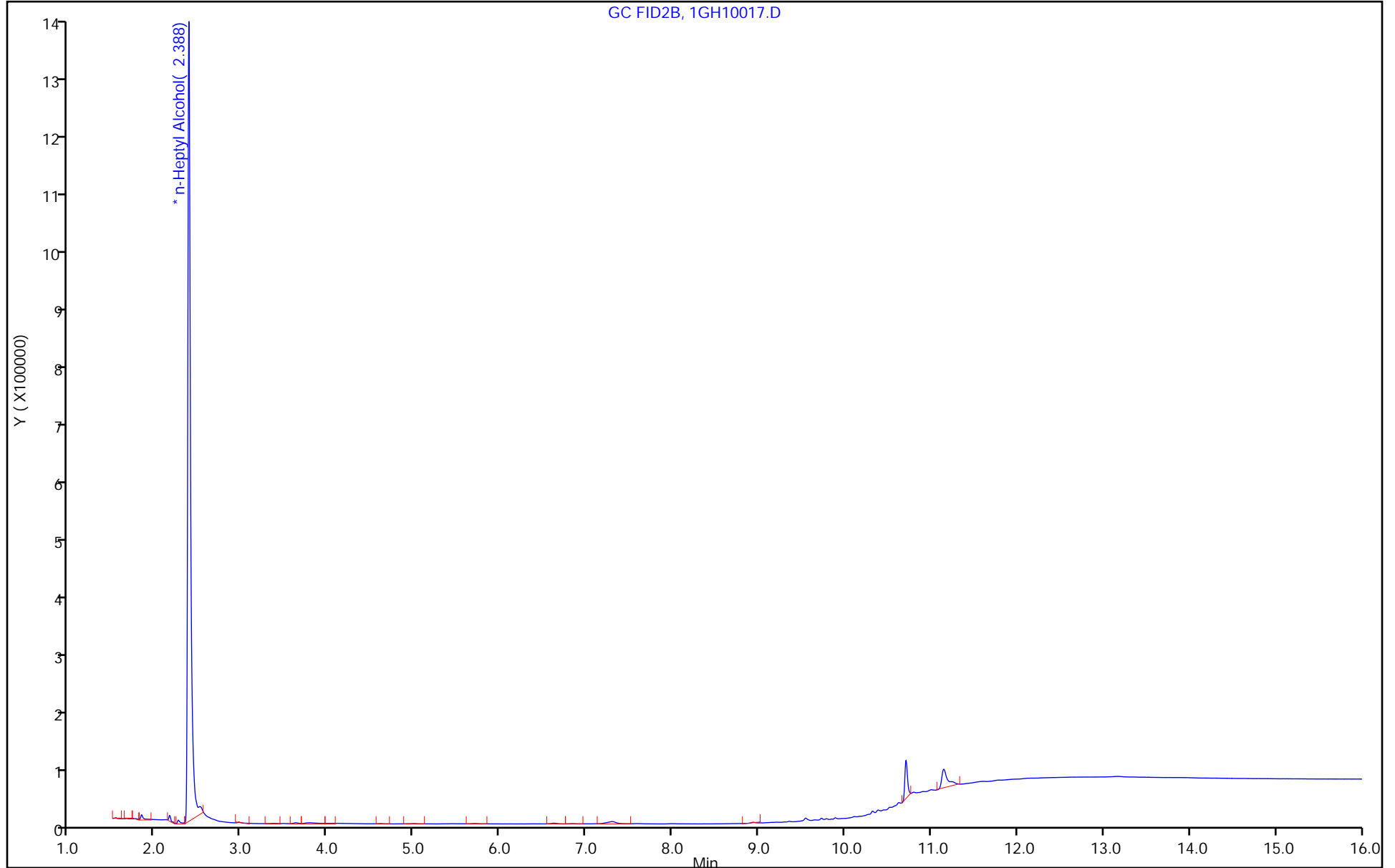
ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1GH10017.D



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AF-RHMW12A-WGN01LF-2308 Lab Sample ID: 580-130241-4  
 Matrix: Water Lab File ID: 1GH10018.D  
 Analysis Method: 8015C GLY Date Collected: 08/03/2023 09:30  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 08/10/2023 20:05  
 Con. Extract Vol.: 1(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 792737 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	3.0	1.1

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10018.D  
 Lims ID: 580-130241-C-4  
 Client ID: AF-RHMW12A-WGN01LF-2308  
 Sample Type: Client  
 Inject. Date: 10-Aug-2023 20:05:31      ALS Bottle#: 0      Worklist Smp#: 18  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 680-0088172-018  
 Operator ID:      Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 10-Aug-2023 23:22:06      Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm)      Det: GC FID2B  
 Process Host: CTX1650

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
--------------	------------------	------------------	----------	--------------------	-------

\* 4 n-Heptyl Alcohol  
 2.389    2.405    -0.016    3528344    50.0

**Reagents:**

SG\_GLY\_ISTD\_00127      Amount Added: 10.00      Units: uL      Run Reagent



Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10018.D

Injection Date: 10-Aug-2023 20:05:31

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-130241-C-4

Lab Sample ID: 680-130241-4

Worklist Smp#: 18

Client ID: AF-RHMW12A-WGN01LF-2308

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

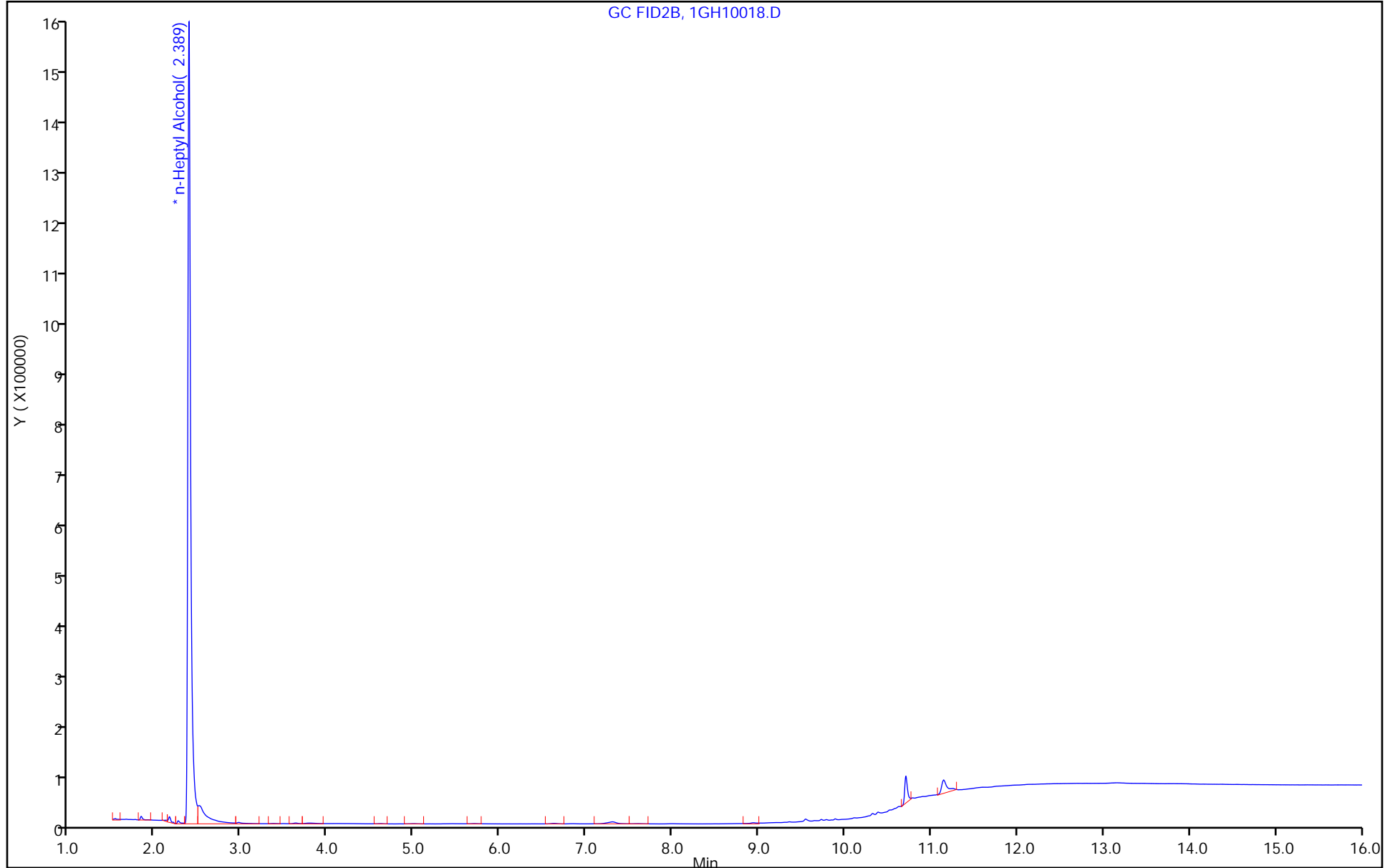
ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1GH10018.D



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AF-RHMW12A-WGFD01LF-2308 Lab Sample ID: 580-130241-5  
 Matrix: Water Lab File ID: 1GH10019.D  
 Analysis Method: 8015C GLY Date Collected: 08/03/2023 09:30  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 08/10/2023 20:28  
 Con. Extract Vol.: 1(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 792737 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	3.0	1.1

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10019.D  
 Lims ID: 580-130241-B-5  
 Client ID: AF-RHMW12A-WGFD01LF-2308  
 Sample Type: Client  
 Inject. Date: 10-Aug-2023 20:28:39      ALS Bottle#: 0      Worklist Smp#: 19  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 680-0088172-019  
 Operator ID:      Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 10-Aug-2023 23:22:06      Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm)      Det: GC FID2B  
 Process Host: CTX1650

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
--------------	------------------	------------------	----------	--------------------	-------

\* 4 n-Heptyl Alcohol  
 2.386    2.405    -0.019    2804208    50.0

**Reagents:**

SG\_GLY\_ISTD\_00127      Amount Added: 10.00      Units: uL      Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10019.D

Injection Date: 10-Aug-2023 20:28:39

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-130241-B-5

Lab Sample ID: 680-130241-5

Worklist Smp#: 19

Client ID: AF-RHMW12A-WGFD01LF-2308

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

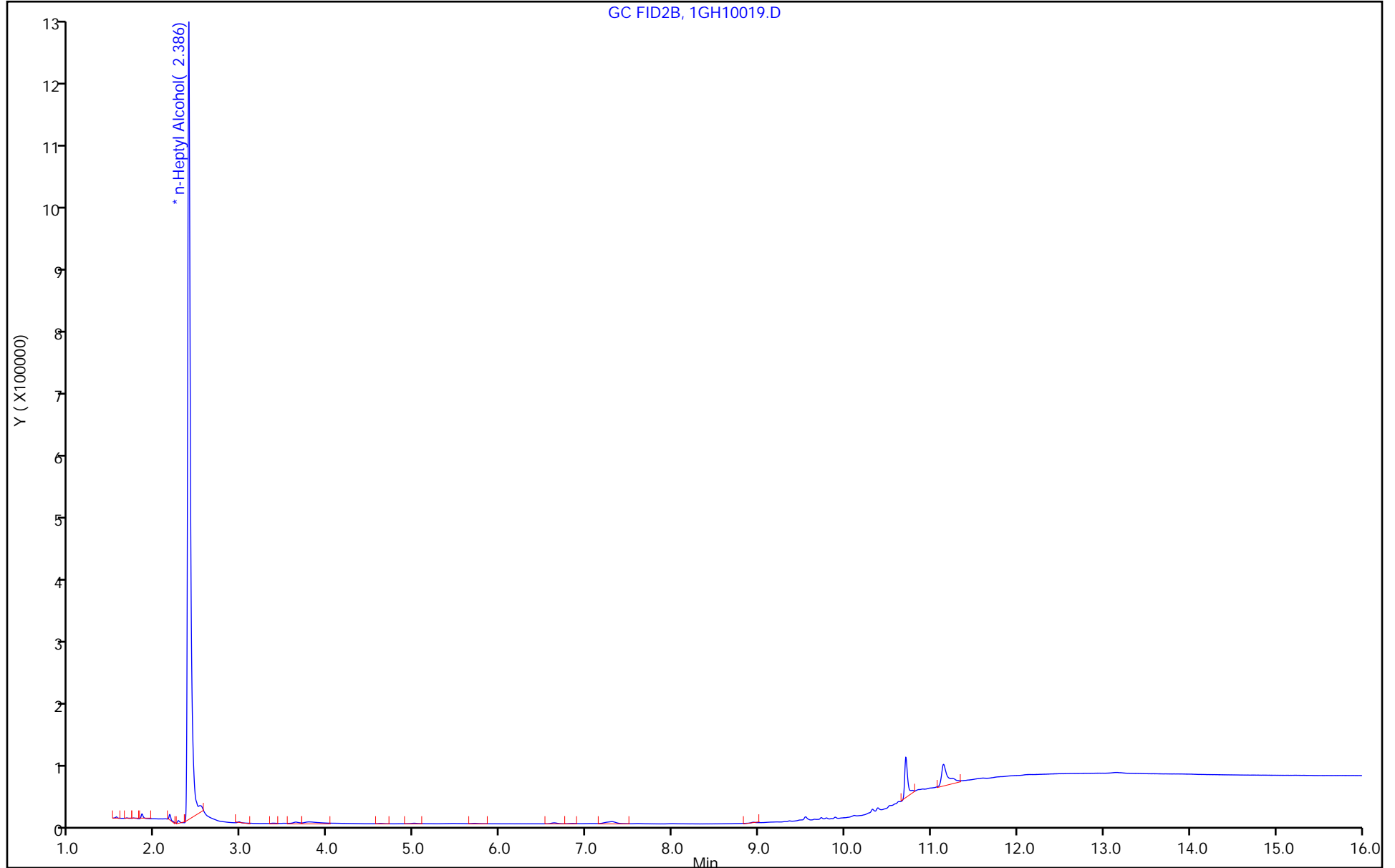
ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1GH10019.D



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AF-RHWW16-WGN01LF-2308 Lab Sample ID: 580-130241-6  
 Matrix: Water Lab File ID: 1GH10020.D  
 Analysis Method: 8015C GLY Date Collected: 08/03/2023 11:25  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 08/10/2023 20:51  
 Con. Extract Vol.: 1(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 792737 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	3.0	1.1

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10020.D  
 Lims ID: 580-130241-B-6  
 Client ID: AF-RHMW16-WGN01LF-2308  
 Sample Type: Client  
 Inject. Date: 10-Aug-2023 20:51:39 ALS Bottle#: 0 Worklist Smp#: 20  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0088172-020  
 Operator ID: Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 10-Aug-2023 23:22:06 Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1650

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
-----------	---------------	---------------	----------	-----------------	-------

1 Ethanol, 2-propoxy					
1.738	1.756	-0.018	1502	-1.89	7
LOD = 0.5000					
2 4-Hydroxy-4-methyl-2-pentanone					
2.121	2.125	-0.004	6165	-2.96	7
LOD = 0.5000					
3 2-Butoxyethanol					
2.263	2.225	0.038	6722	-1.49	7
LOD = 0.5000					
* 4 n-Heptyl Alcohol					
2.389	2.405	-0.016	3726891	50.0	
5 Dipropylene Glycol Methyl Ether					
2.968	2.920	0.048	3576	-0.5296	7
LOD = 0.5000					
7 Ethylene glycol					
3.785	3.788	-0.003	21450	1.75	
9 2,2'-Oxybisethanol					
7.293	7.243	0.050	27297	1.25	7
LOD = 1.60					

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

SG\_GLY\_ISTD\_00127 Amount Added: 10.00 Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10020.D

Injection Date: 10-Aug-2023 20:51:39

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-130241-B-6

Lab Sample ID: 680-130241-6

Worklist Smp#: 20

Client ID: AF-RHMW16-WGN01LF-2308

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

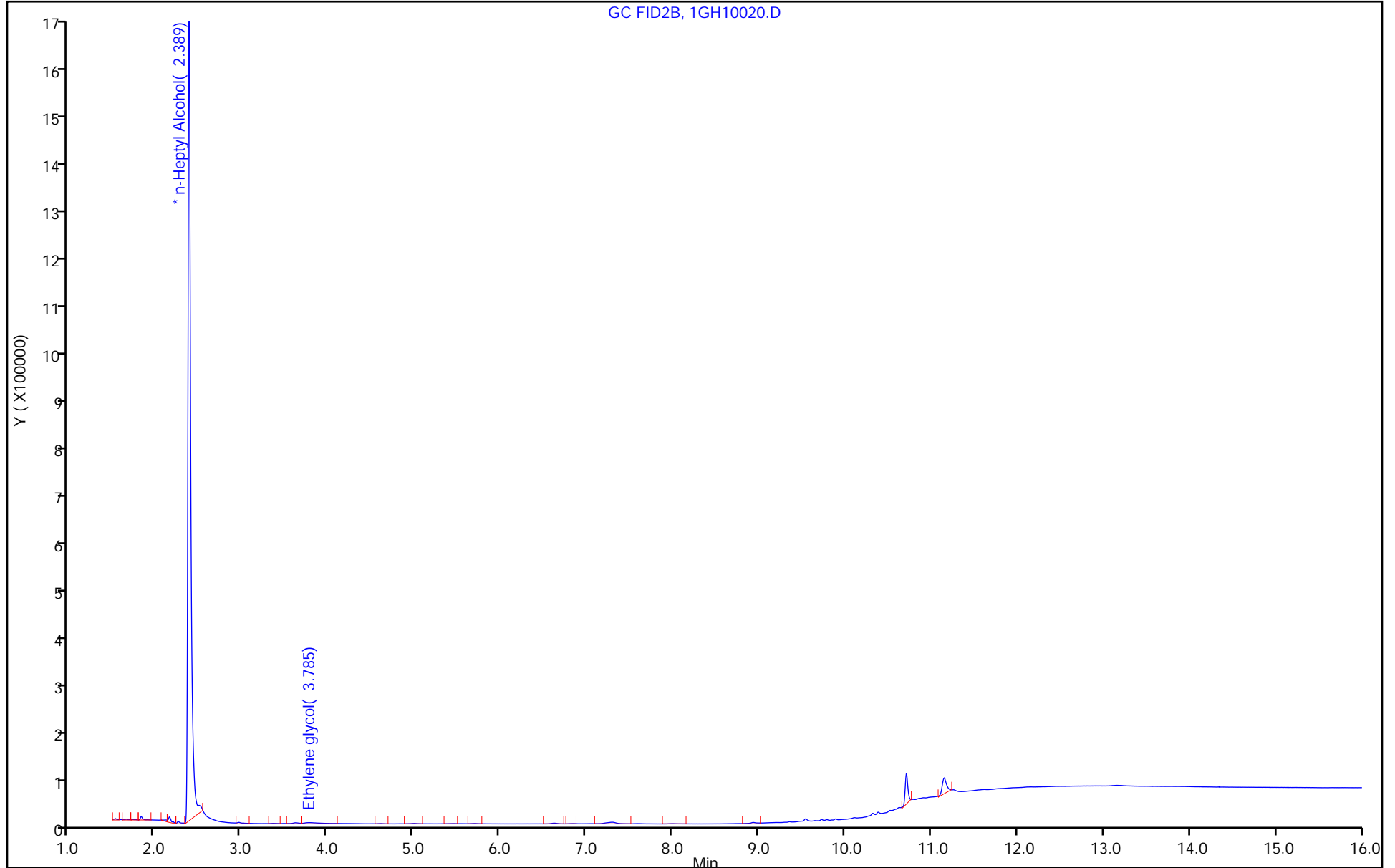
ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1GH10020.D



FORM VI  
GC SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
CURVE EVALUATION

Lab Name: Eurofins Savannah Job No.: 580-130241-1 Analy Batch No.: 788122  
 SDG No.: \_\_\_\_\_  
 Instrument ID: CVGG2 GC Column: J&W DB WAX ID: 0.45 (mm) Heated Purge: (Y/N) N  
 Calibration Start Date: 07/13/2023 12:19 Calibration End Date: 07/13/2023 14:38 Calibration ID: 91431

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-788122/10	1GG12010.D
Level 2	IC 680-788122/9	1GG12009.D
Level 3	IC 680-788122/8	1GG12008.D
Level 4	ICIS 680-788122/7	1GG12007.D
Level 5	IC 680-788122/6	1GG12006.D
Level 6	IC 680-788122/5	1GG12005.D
Level 7	IC 680-788122/4	1GG12004.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethanol, 2-propoxy	0.8965 0.5127	0.7463 0.4762	0.6557	0.6019	0.5002	Qua	1.036 3	0.536 2	-0.000651					0.9980		0.9900	
4-Hydroxy-4-methyl-2-pentanone	1.2568 0.5141	0.8334 0.4583	0.7027	0.6148	0.4992	Lin2	1.557 6	0.498 5						0.9920		0.9900	
2-Butoxyethanol	0.9977 0.5468	0.8089 0.5243	0.7045	0.6585	0.5482	Lin2	0.931 8	0.565 3						0.9900		0.9900	
Dipropylene Glycol Methyl Ether	0.0721 0.0405	0.0661 0.0369	0.0526	0.0480	0.0415	Qua	0.072 4	0.046 0	-0.000095					0.9990		0.9900	
Propylene glycol	0.2266 0.1641	0.2477 0.1545	0.2028	0.1723	0.1936	Qua	-0.05 8	0.216 8	-0.000620					0.9970		0.9900	
Ethylene glycol	0.4994 0.2976	0.4076 0.2684	0.3375	0.2758	0.3539	Qua	-0.42 8	0.410 6	-0.001357					0.9940		0.9900	
2-(2-Butoxyethoxy)ethanol	0.7690 0.4119	0.6338 0.3797	0.5219	0.4910	0.4310	Qua	0.631 7	0.477 2	-0.001009					0.9990		0.9900	
2,2'-Oxybisethanol	0.4054 0.2009	0.3285 0.1850	0.2567	0.2159	0.2422	Qua	0.024 5	0.274 1	-0.000892					0.9960		0.9900	
Triethylene Glycol	0.6015 0.2034	0.4298 0.1880	0.3033	0.2350	0.2488	Qua	0.503 1	0.269 2	-0.000865					0.9960		0.9900	
Tetraethylene Glycol	0.5248 0.2099	0.3198 0.2008	0.2511	0.2478	0.2550	Lin1	1.249 9	0.207 3						0.9910		0.9900	

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.



FORM VI  
GC SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Savannah Job No.: 580-130241-1 Analy Batch No.: 788122

SDG No.: \_\_\_\_\_

Instrument ID: CVGG2 GC Column: J&W DB WAX ID: 0.45 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/13/2023 12:19 Calibration End Date: 07/13/2023 14:38 Calibration ID: 91431

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-788122/10	1GG12010.D
Level 2	IC 680-788122/9	1GG12009.D
Level 3	IC 680-788122/8	1GG12008.D
Level 4	ICIS 680-788122/7	1GG12007.D
Level 5	IC 680-788122/6	1GG12006.D
Level 6	IC 680-788122/5	1GG12005.D
Level 7	IC 680-788122/4	1GG12004.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7				LVL 6	LVL 7			
Ethanol, 2-propoxy	nHPA	Qua	157725 3002619	328085 3927340	490796	1139895	2182101	2.00 80.0	5.00 100	10.0	20.0	50.0
4-Hydroxy-4-methyl-2-pentanone	nHPA	Lin2	221110 3010969	366403 3779963	525997	1164257	2177792	2.00 80.0	5.00 100	10.0	20.0	50.0
2-Butoxyethanol	nHPA	Lin2	175525 3202437	355617 4324063	527345	1247193	2391339	2.00 80.0	5.00 100	10.0	20.0	50.0
Dipropylene Glycol Methyl Ether	nHPA	Qua	12682 236978	29061 304364	39340	90818	181056	2.00 80.0	5.00 100	10.0	20.0	50.0
Propylene glycol	nHPA	Qua	39866 960893	108889 1274011	151790	326331	844531	2.00 80.0	5.00 100	10.0	20.0	50.0
Ethylene glycol	nHPA	Qua	87868 1742657	179176 2213314	252621	522300	1543746	2.00 80.0	5.00 100	10.0	20.0	50.0
2-(2-Butoxyethoxy)ethanol	nHPA	Qua	135291 2412415	278655 3131524	390667	929954	1879900	2.00 80.0	5.00 100	10.0	20.0	50.0
2,2'-Oxybisethanol	nHPA	Qua	71330 1176744	144443 1526008	192116	408926	1056556	2.00 80.0	5.00 100	10.0	20.0	50.0
Triethylene Glycol	nHPA	Qua	105822 1191038	188948 1550149	227057	445021	1085434	2.00 80.0	5.00 100	10.0	20.0	50.0
Tetraethylene Glycol	nHPA	Lin1	184657 2458534	281236 3311764	375887	938478	2224353	4.00 160	10.0 200	20.0	40.0	100

Curve Type Legend

Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua = Quadratic ISTD

FORM VI  
GC SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
READBACK PERCENT ERROR

Lab Name: Eurofins Savannah Job No.: 580-130241-1 Analy Batch No.: 788122

SDG No.: \_\_\_\_\_

Instrument ID: CVGG2 GC Column: J&W DB WAX ID: 0.45 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/13/2023 12:19 Calibration End Date: 07/13/2023 14:38 Calibration ID: 91431

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-788122/10	1GG12010.D
Level 2	IC 680-788122/9	1GG12009.D
Level 3	IC 680-788122/8	1GG12008.D
Level 4	ICIS 680-788122/7	1GG12007.D
Level 5	IC 680-788122/6	1GG12006.D
Level 6	IC 680-788122/5	1GG12005.D
Level 7	IC 680-788122/4	1GG12004.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT						
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	
4-Hydroxy-4-methyl-2-pentanone	-4.1 -11.2	4.7	9.7	7.7	-6.1	-0.8	20 20	20	20	20	20	20	20
2-Butoxyethanol	-5.9 -8.9	10.1	8.1	8.2	-6.3	-5.3	20 20	20	20	20	20	20	20
Tetraethylene Glycol	2.4 -6.2	-6.0	-9.0	4.4	16.9	-2.5	20 20	20	20	20	20	20	20

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12004.D  
 Lims ID: ic g7  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 13-Jul-2023 12:19:47 ALS Bottle#: 0 Worklist Smp#: 4  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0087436-004  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 13-Jul-2023 19:33:08 Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1662

First Level Reviewer: AR8P Date: 13-Jul-2023 19:26:18

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1.793	1.793	0.000	3927340	100.0	98.7	
2.149	2.149	0.000	3779963	100.0	88.8	
2.254	2.254	0.000	4324063	100.0	91.1	
* 2.451	2.451	0.000	4123510	50.0	50.0	
2.979	2.979	0.000	304364	100.0	98.5	
3.574	3.574	0.000	1274011	100.0	100.3	
3.848	3.848	0.000	2213314	100.0	98.4	
5.315	5.315	0.000	3131524	100.0	99.0	
7.374	7.374	0.000	1526008	100.0	99.9	
9.592	9.592	0.000	1550149	100.0	100.2	M
10.428	10.428	0.000	3311764	200.0	187.7	M

QC Flag Legend  
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG\_Gly\_CAL\_00053

Amount Added: 50.00

Units: uL

SG\_GLY\_ISTD\_00124

Amount Added: 10.00

Units: uL

Run Reagent

Euofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12004.D

Injection Date: 13-Jul-2023 12:19:47

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g7

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

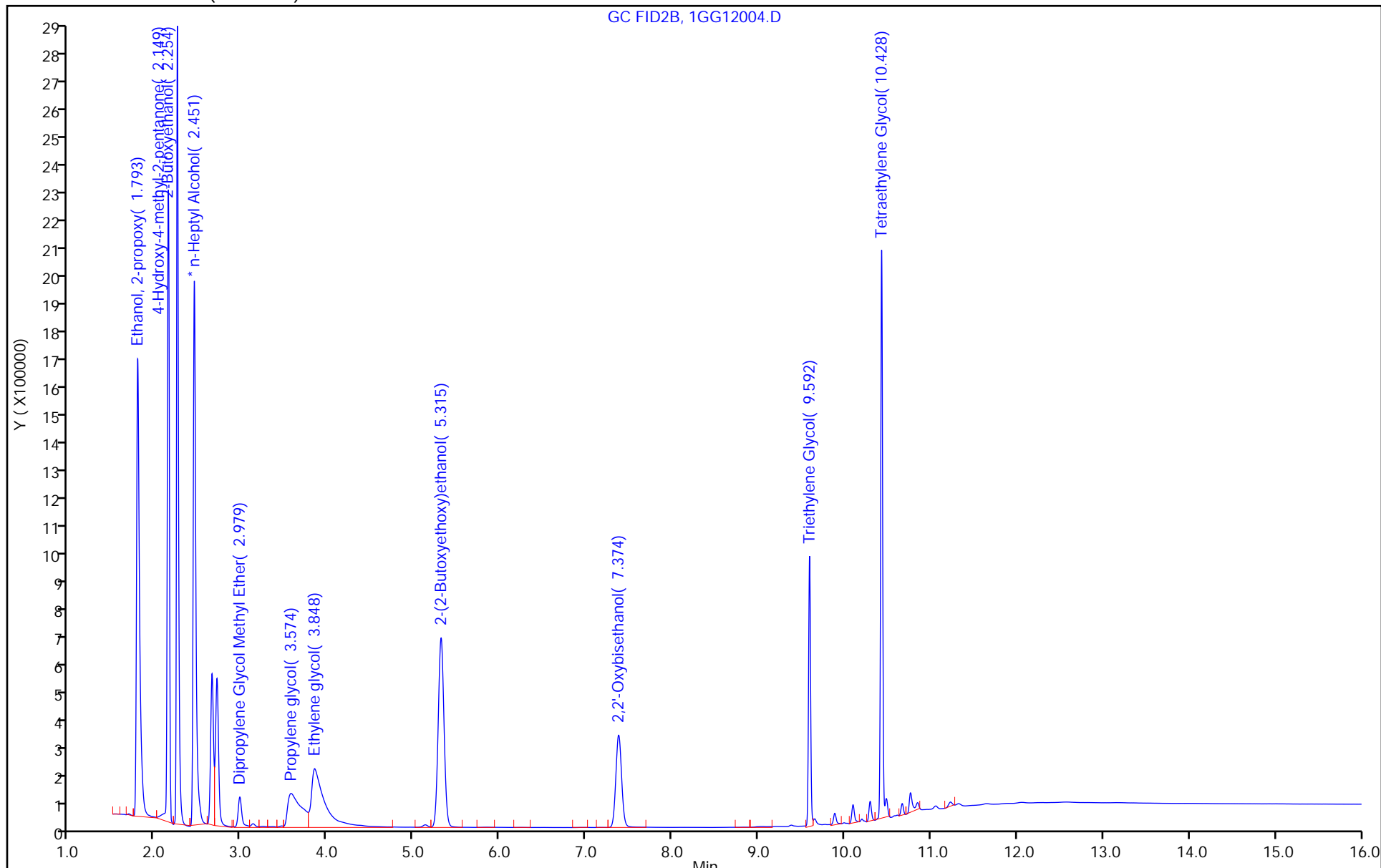
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

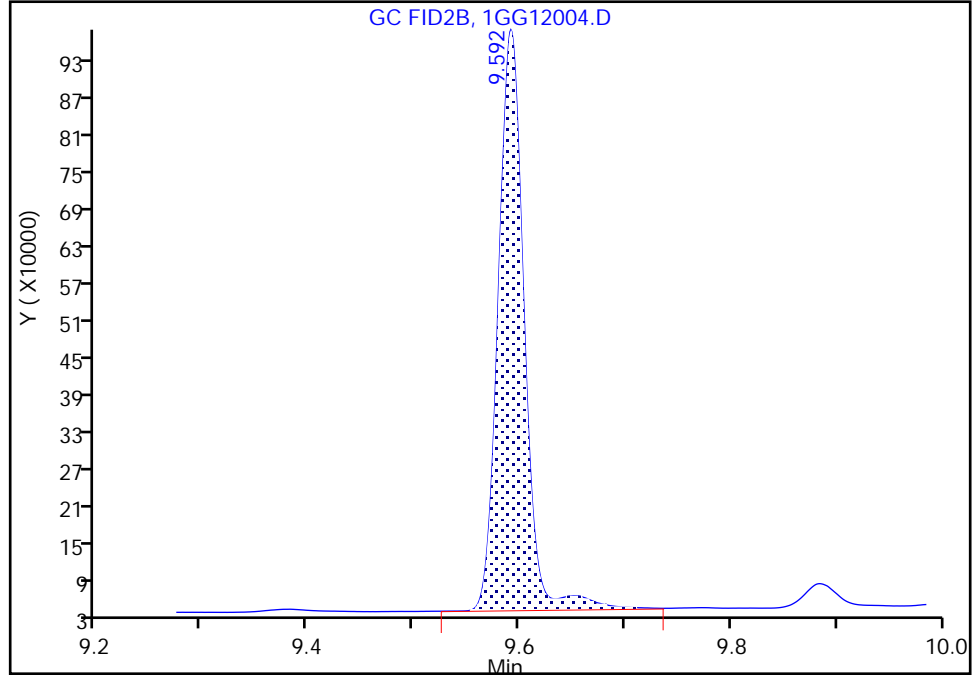
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12004.D  
Injection Date: 13-Jul-2023 12:19:47 Instrument ID: CVGG2  
Lims ID: ic g7  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

10 Triethylene Glycol, CAS: 112-27-6

Signal: 1

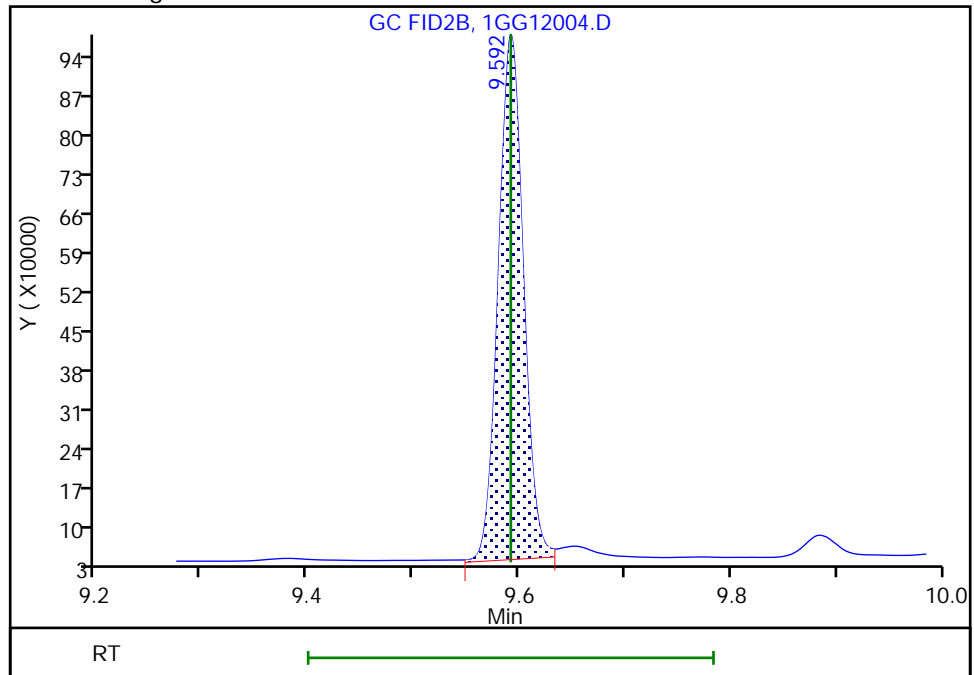
RT: 9.59  
Area: 1608110  
Amount: 100.6846  
Amount Units: ug/ml

Processing Integration Results



RT: 9.59  
Area: 1550149  
Amount: 100.2353  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Jul-2023 19:26:14 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Shouldering

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12005.D  
 Lims ID: ic g6  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 13-Jul-2023 12:42:52 ALS Bottle#: 0 Worklist Smp#: 5  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0087436-005  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 13-Jul-2023 19:33:09 Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1662

First Level Reviewer: AR8P Date: 13-Jul-2023 19:22:40

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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1 Ethanol, 2-propoxy	1.793	1.793	0.000	3002619	80.0	82.9
2 4-Hydroxy-4-methyl-2-pentanone	2.150	2.149	0.001	3010969	80.0	79.4
3 2-Butoxyethanol	2.252	2.254	-0.002	3202437	80.0	75.7
* 4 n-Heptyl Alcohol	2.445	2.451	-0.006	3660178	50.0	50.0
5 Dipropylene Glycol Methyl Ether	2.983	2.979	0.004	236978	80.0	82.8
6 Propylene glycol	3.576	3.574	0.002	960893	80.0	78.4
7 Ethylene glycol	3.849	3.848	0.001	1742657	80.0	80.4
8 2-(2-Butoxyethoxy)ethanol	5.315	5.315	0.000	2412415	80.0	81.9
9 2,2'-Oxybisethanol	7.376	7.374	0.002	1176744	80.0	78.7
10 Triethylene Glycol	9.593	9.592	0.001	1191038	80.0	78.2 M
11 Tetraethylene Glycol	10.429	10.428	0.001	2458534	160.0	156.0 M

QC Flag Legend  
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG\_Gly\_CAL\_00053

Amount Added: 40.00

Units: uL

SG\_GLY\_ISTD\_00124

Amount Added: 10.00

Units: uL

Run Reagent



Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12005.D

Injection Date: 13-Jul-2023 12:42:52

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g6

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

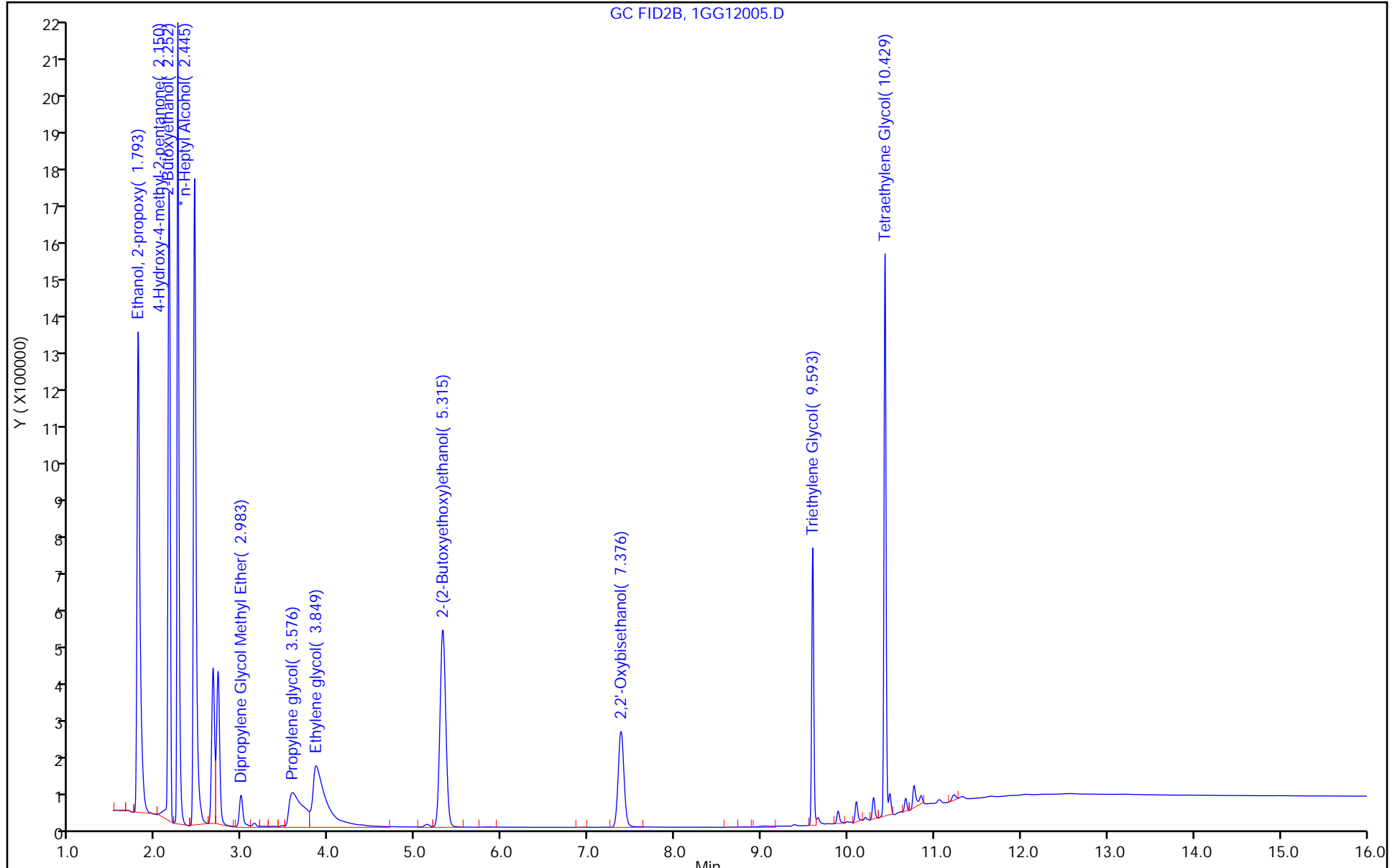
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

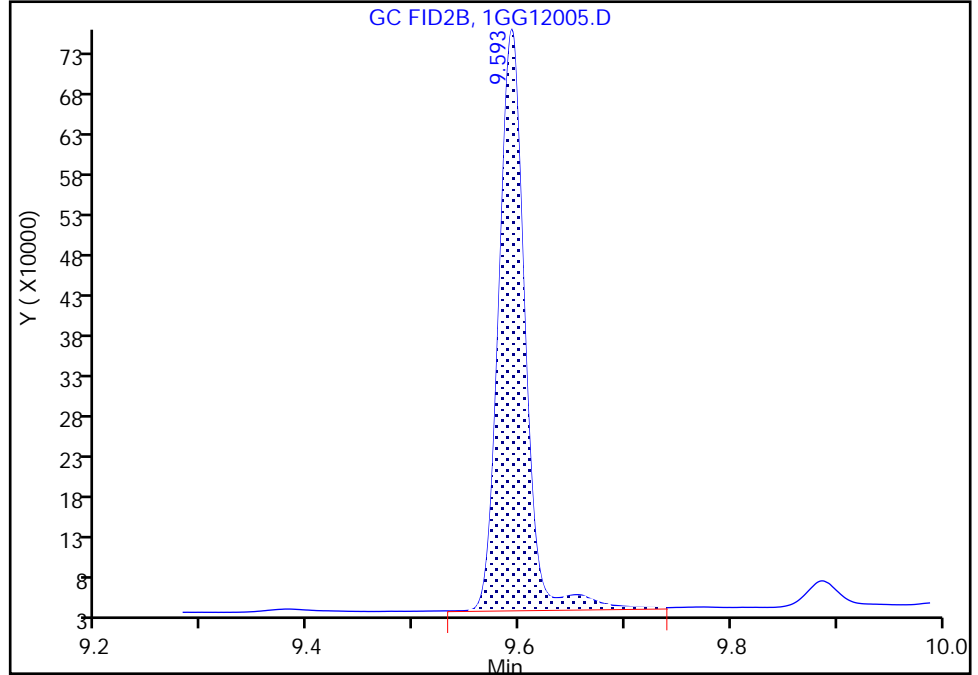
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12005.D  
Injection Date: 13-Jul-2023 12:42:52 Instrument ID: CVGG2  
Lims ID: ic g6  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

10 Triethylene Glycol, CAS: 112-27-6

Signal: 1

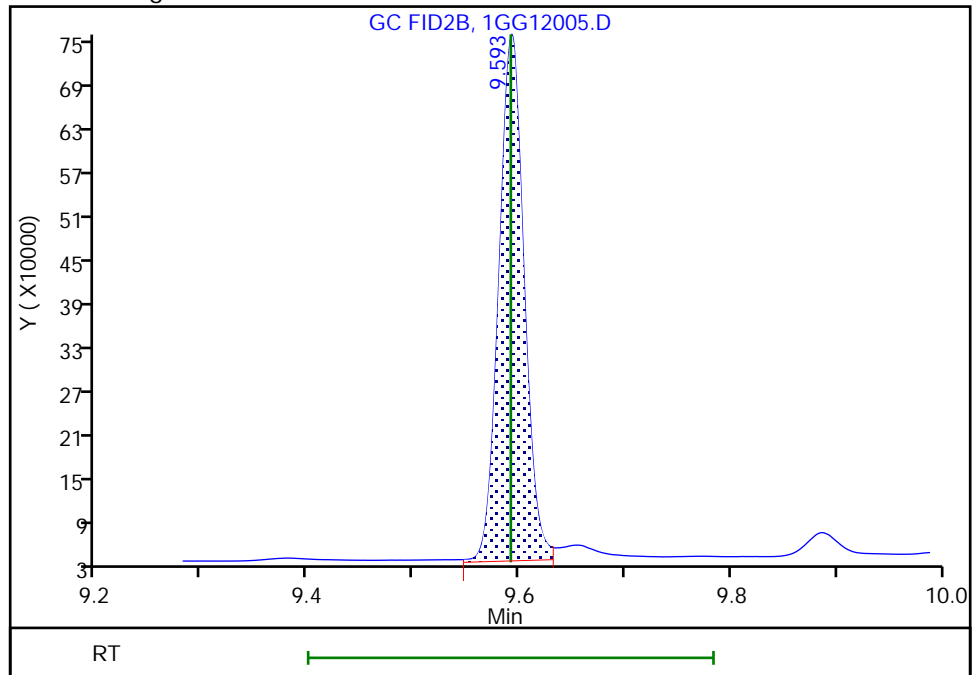
RT: 9.59  
Area: 1227216  
Amount: 79.305625  
Amount Units: ug/ml

Processing Integration Results



RT: 9.59  
Area: 1191038  
Amount: 78.237846  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Jul-2023 19:26:28 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Shouldering

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12006.D  
 Lims ID: ic g5  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 13-Jul-2023 13:05:59 ALS Bottle#: 0 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0087436-006  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 13-Jul-2023 19:33:09 Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1662

First Level Reviewer: AR8P Date: 13-Jul-2023 19:22:58

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.790	1.793	-0.003	2182101	50.0	47.4	
2 4-Hydroxy-4-methyl-2-pentanone						
2.147	2.149	-0.002	2177792	50.0	47.0	
3 2-Butoxyethanol						
2.251	2.254	-0.003	2391339	50.0	46.8	
* 4 n-Heptyl Alcohol						
2.447	2.451	-0.004	4362215	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.977	2.979	-0.002	181056	50.0	48.3	
6 Propylene glycol						
3.573	3.574	-0.001	844531	50.0	52.9	
7 Ethylene glycol						
3.849	3.848	0.001	1543746	50.0	53.7	
8 2-(2-Butoxyethoxy)ethanol						
5.314	5.315	-0.001	1879900	50.0	48.9	
9 2,2'-Oxybisethanol						
7.375	7.374	0.001	1056556	50.0	53.4	
10 Triethylene Glycol						
9.592	9.592	0.000	1085434	50.0	53.6	M
11 Tetraethylene Glycol						
10.427	10.428	-0.001	2224353	100.0	116.9	M

QC Flag Legend  
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG\_Gly\_CAL\_00053

Amount Added: 25.00

Units: uL

SG\_GLY\_ISTD\_00124

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12006.D

Injection Date: 13-Jul-2023 13:05:59

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g5

Worklist Smp#: 6

Client ID:

Injection Vol: 1.0 ul

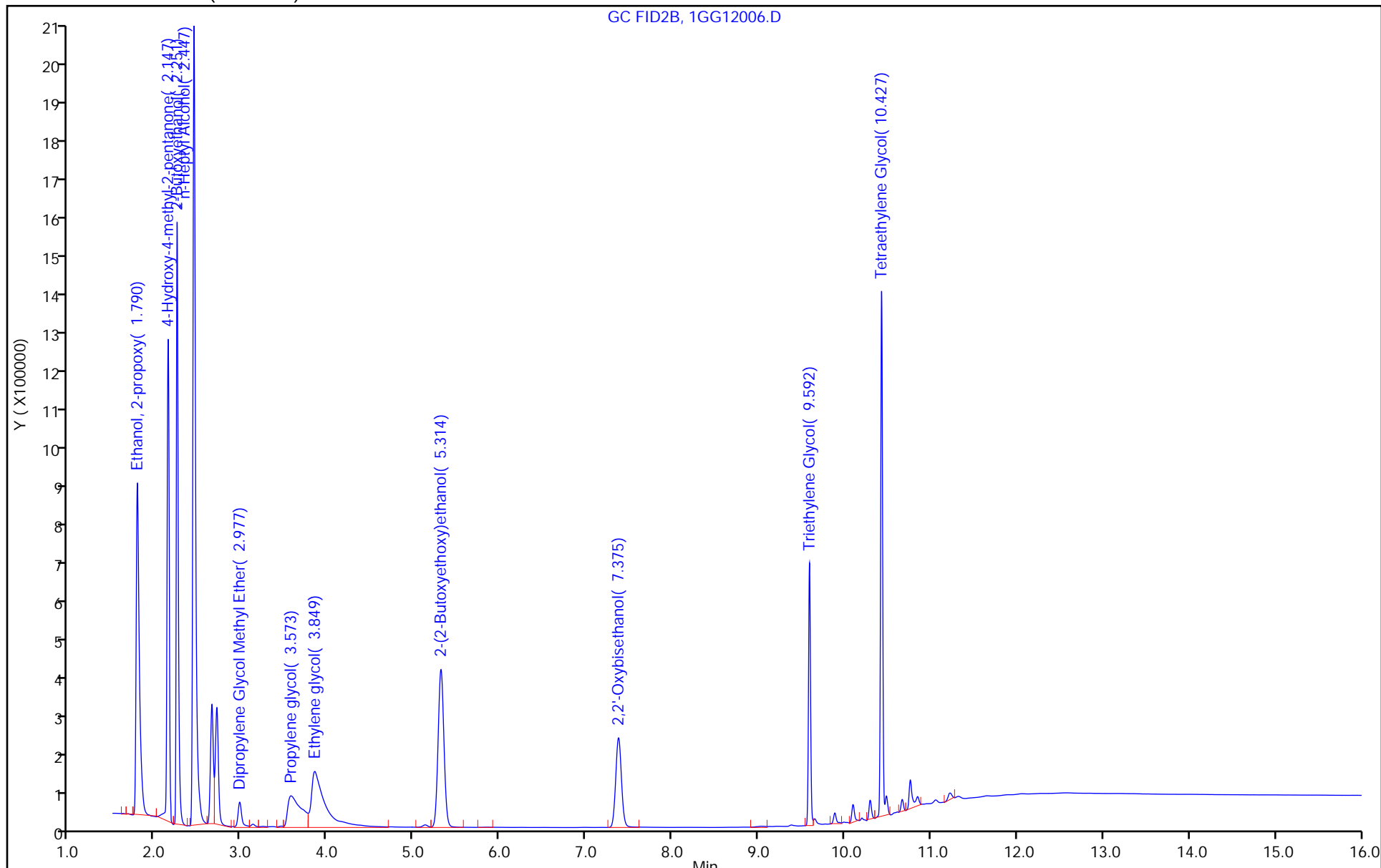
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

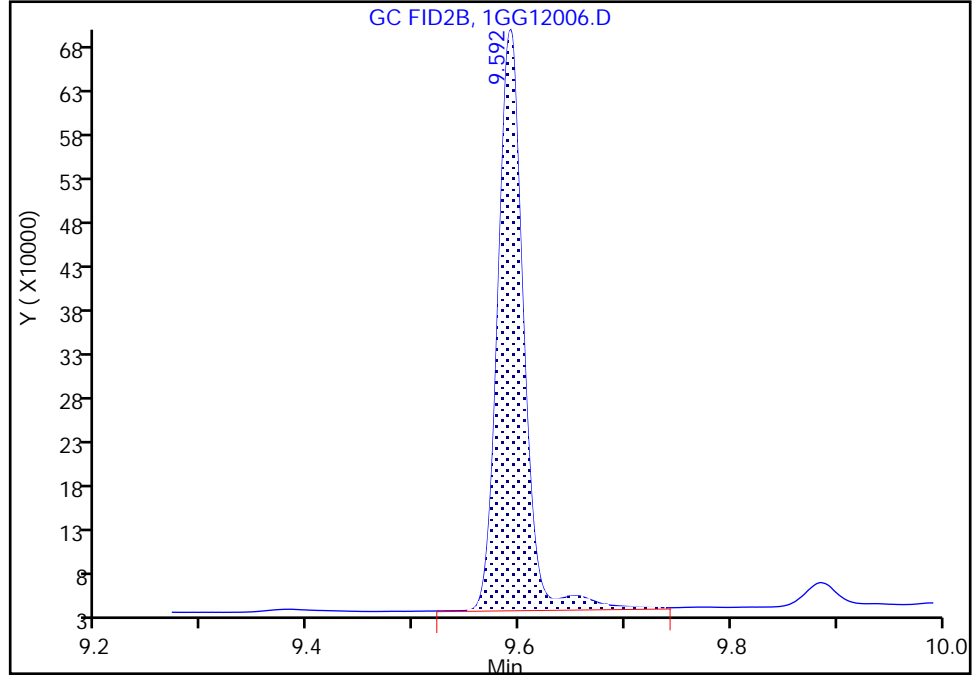
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12006.D  
Injection Date: 13-Jul-2023 13:05:59 Instrument ID: CVGG2  
Lims ID: ic g5  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

10 Triethylene Glycol, CAS: 112-27-6

Signal: 1

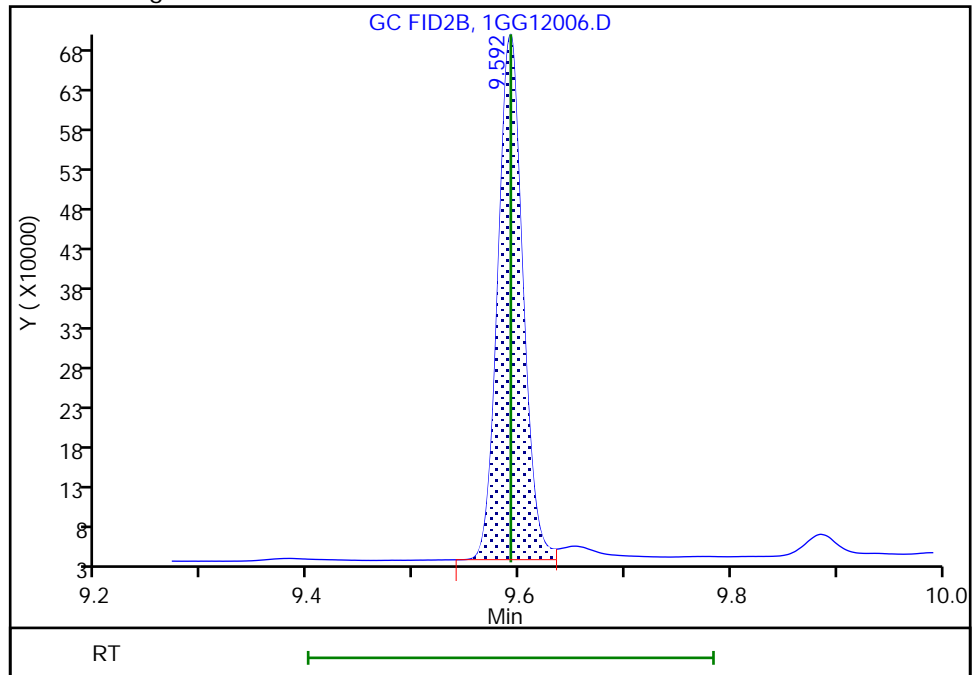
RT: 9.59  
Area: 1116090  
Amount: 53.855645  
Amount Units: ug/ml

Processing Integration Results



RT: 9.59  
Area: 1085434  
Amount: 53.567390  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Jul-2023 19:26:52 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Shouldering

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12007.D  
 Lims ID: icis g4  
 Client ID:  
 Sample Type: ICIS Calib Level: 4  
 Inject. Date: 13-Jul-2023 13:29:12 ALS Bottle#: 0 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0087436-007  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 13-Jul-2023 19:33:10 Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1662

First Level Reviewer: AR8P Date: 13-Jul-2023 19:23:14

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.790	1.790	0.000	1139895	20.0	21.1	
2 4-Hydroxy-4-methyl-2-pentanone						
2.148	2.148	0.000	1164257	20.0	21.5	
3 2-Butoxyethanol						
2.249	2.249	0.000	1247193	20.0	21.6	
* 4 n-Heptyl Alcohol						
2.443	2.443	0.000	4734661	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.979	2.979	0.000	90818	20.0	20.1	
6 Propylene glycol						
3.579	3.579	0.000	326331	20.0	17.0	
7 Ethylene glycol						
3.849	3.849	0.000	522300	20.0	15.2	
8 2-(2-Butoxyethoxy)ethanol						
5.313	5.313	0.000	929954	20.0	20.1	
9 2,2'-Oxybisethanol						
7.374	7.374	0.000	408926	20.0	16.6	
10 Triethylene Glycol						
9.591	9.591	0.000	445021	20.0	16.5	M
11 Tetraethylene Glycol						
10.428	10.428	0.000	938478	40.0	41.8	M

**QC Flag Legend**  
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG\_Gly\_CAL\_00053

Amount Added: 10.00

Units: uL

SG\_GLY\_ISTD\_00124

Amount Added: 10.00

Units: uL

Run Reagent



Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12007.D

Injection Date: 13-Jul-2023 13:29:12

Instrument ID: CVGG2

Operator ID:

Lims ID: icis g4

Worklist Smp#: 7

Client ID:

Injection Vol: 1.0 ul

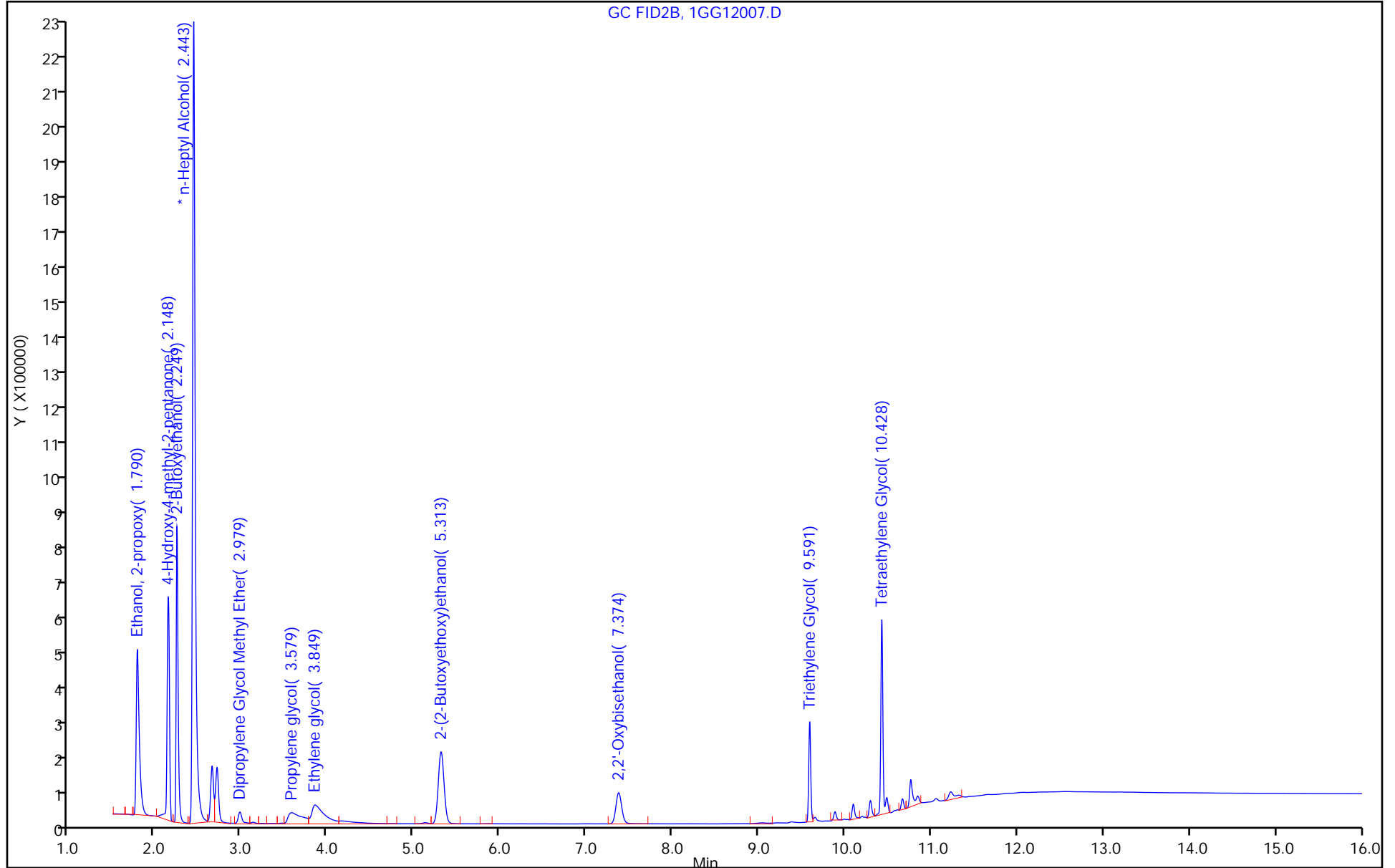
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



Euofins Savannah

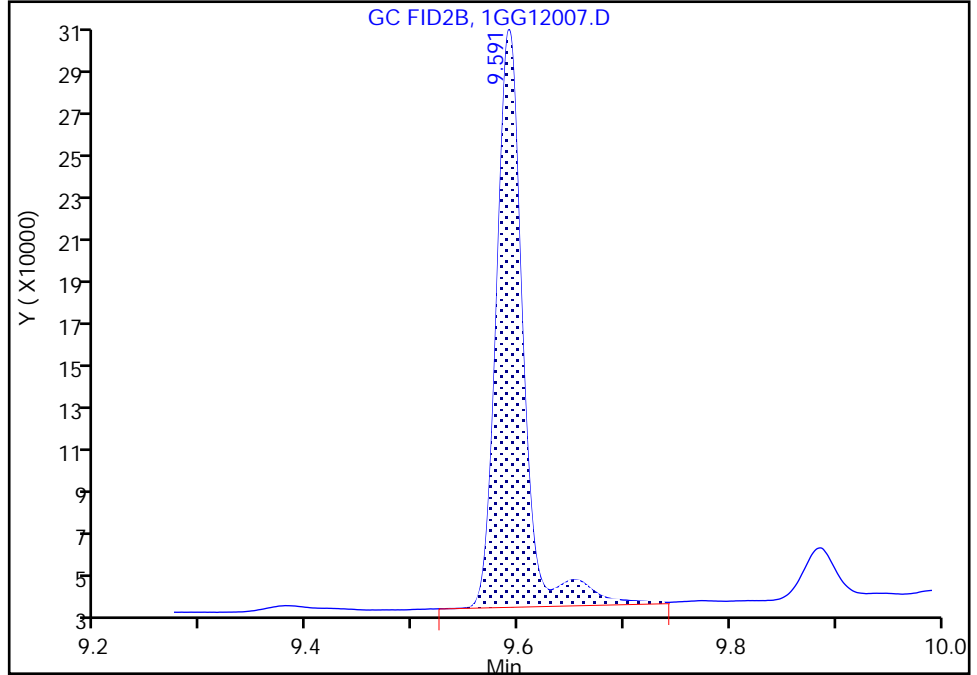
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12007.D  
Injection Date: 13-Jul-2023 13:29:12 Instrument ID: CVGG2  
Lims ID: icis g4  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

10 Triethylene Glycol, CAS: 112-27-6

Signal: 1

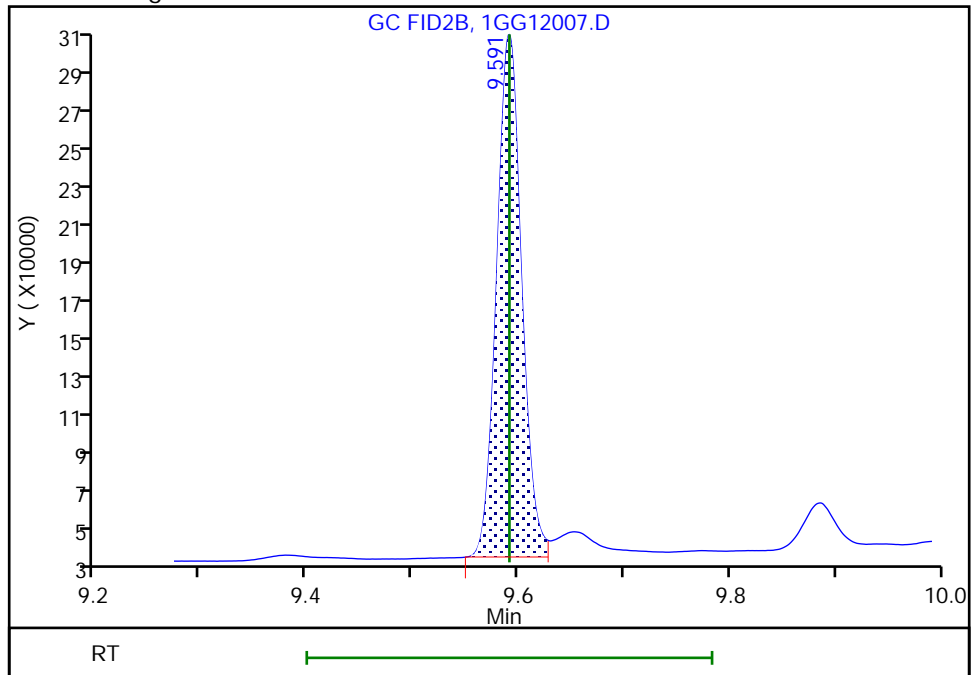
RT: 9.59  
Area: 476805  
Amount: 17.525022  
Amount Units: ug/ml

Processing Integration Results



RT: 9.59  
Area: 445021  
Amount: 16.459726  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Jul-2023 19:27:10 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Shouldering

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12008.D  
 Lims ID: ic g3  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 13-Jul-2023 13:52:21 ALS Bottle#: 0 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0087436-008  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 13-Jul-2023 19:33:10 Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1662

First Level Reviewer: AR8P Date: 13-Jul-2023 19:23:29

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.788	1.790	-0.002	490796	10.0	10.4	
2 4-Hydroxy-4-methyl-2-pentanone						
2.147	2.148	-0.001	525997	10.0	11.0	
3 2-Butoxyethanol						
2.247	2.249	-0.002	527345	10.0	10.8	
* 4 n-Heptyl Alcohol						
2.437	2.443	-0.006	3742624	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.982	2.979	0.003	39340	10.0	10.0	
6 Propylene glycol						
3.577	3.579	-0.002	151790	10.0	9.91	
7 Ethylene glycol						
3.853	3.849	0.004	252621	10.0	9.56	
8 2-(2-Butoxyethoxy)ethanol						
5.314	5.313	0.001	390667	10.0	9.82	
9 2,2'-Oxybisethanol						
7.377	7.374	0.003	192116	10.0	9.57	
10 Triethylene Glycol						
9.590	9.591	-0.001	227057	10.0	9.70	M
11 Tetraethylene Glycol						
10.427	10.428	-0.001	375887	20.0	18.2	M

**QC Flag Legend**  
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG\_Gly\_CAL\_00053

Amount Added: 5.00

Units: uL

SG\_GLY\_ISTD\_00124

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12008.D

Injection Date: 13-Jul-2023 13:52:21

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g3

Worklist Smp#: 8

Client ID:

Injection Vol: 1.0 ul

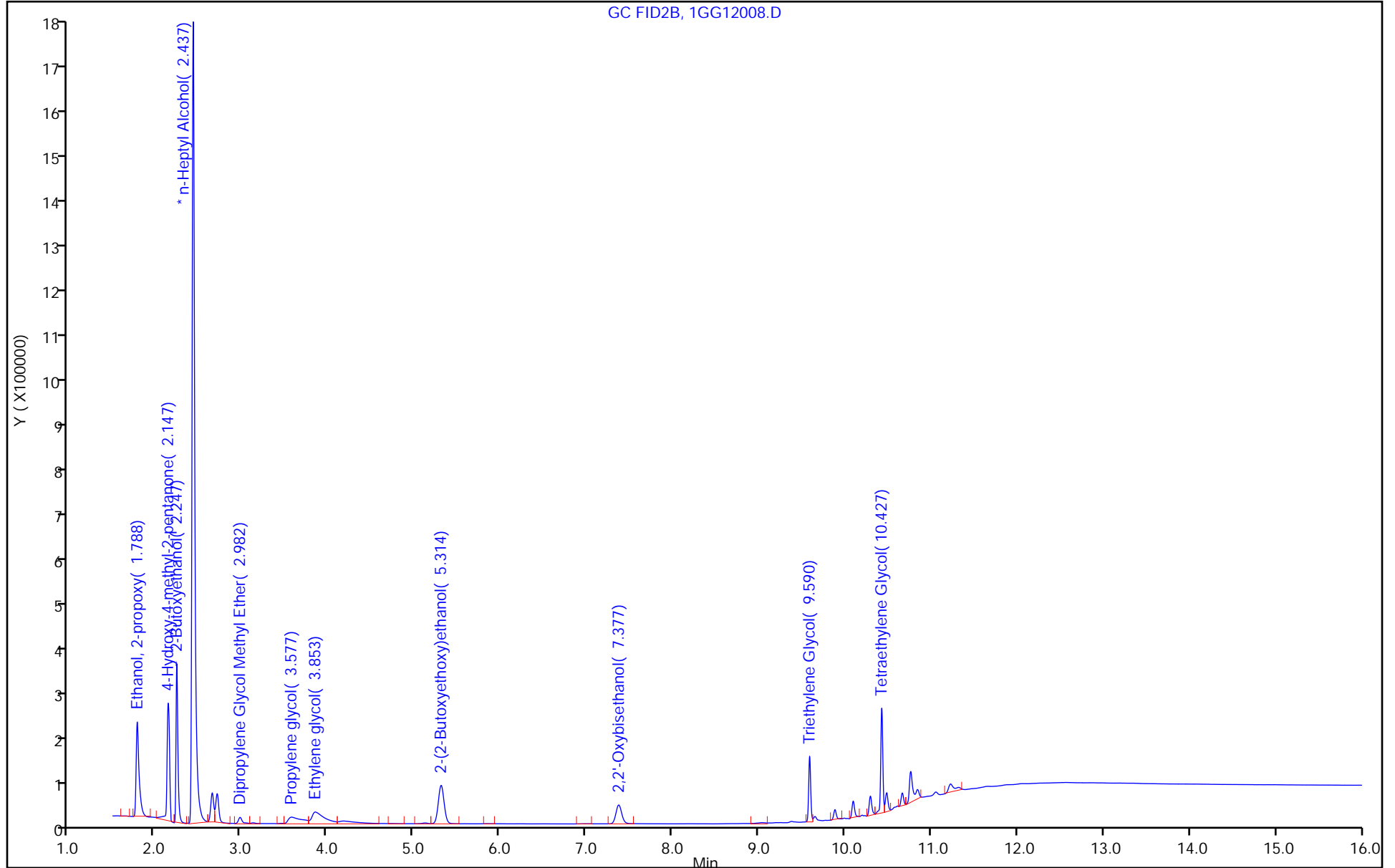
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

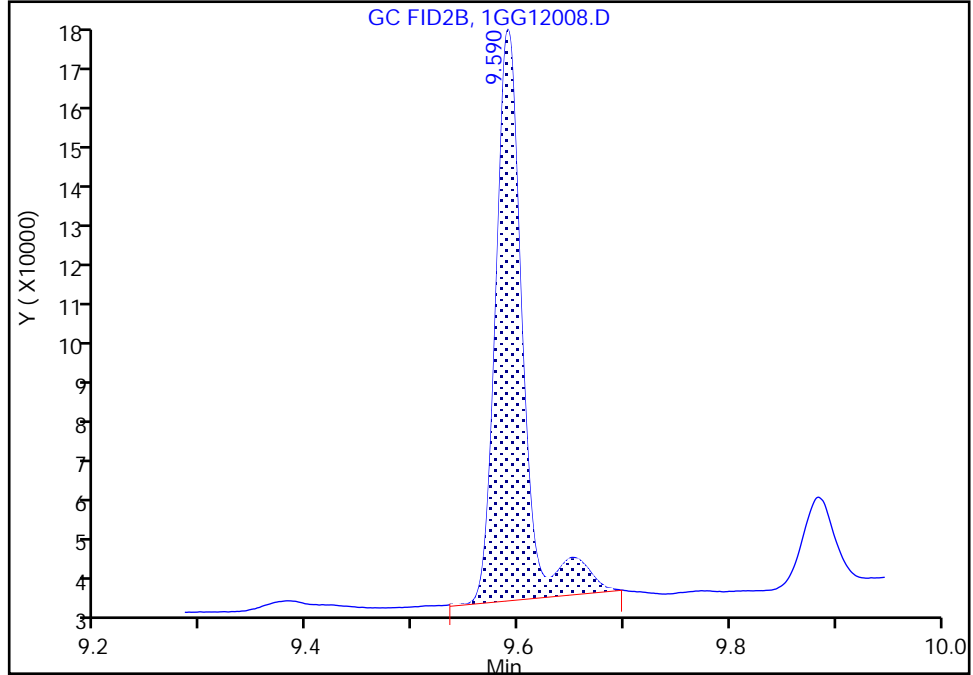
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12008.D  
Injection Date: 13-Jul-2023 13:52:21 Instrument ID: CVGG2  
Lims ID: ic g3  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

10 Triethylene Glycol, CAS: 112-27-6

Signal: 1

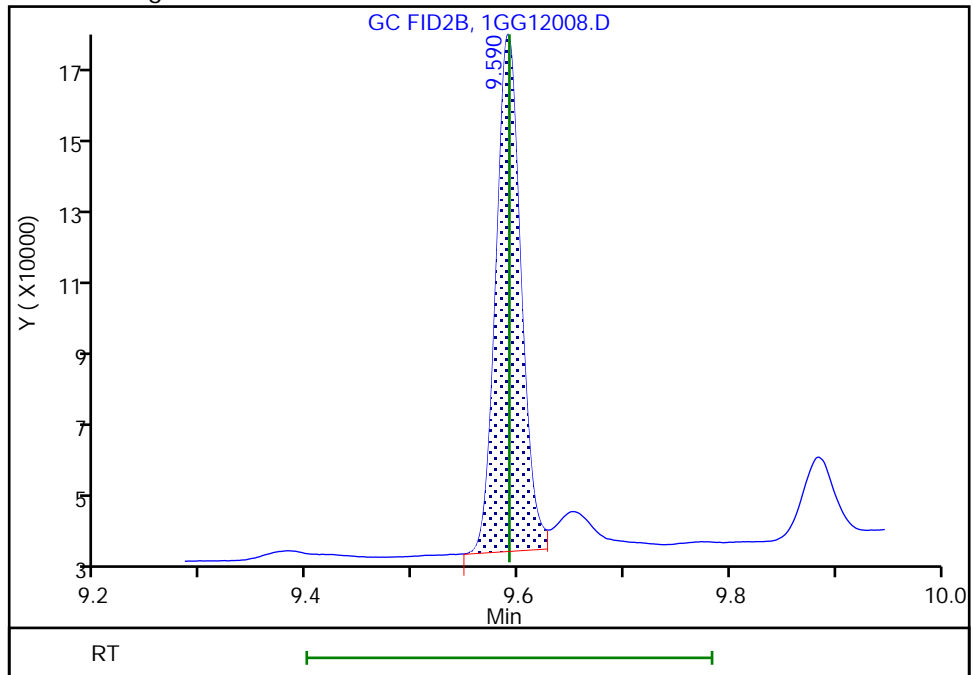
RT: 9.59  
Area: 246951  
Amount: 10.199831  
Amount Units: ug/ml

Processing Integration Results



RT: 9.59  
Area: 227057  
Amount: 9.701977  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Jul-2023 19:25:29 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Shouldering

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12009.D  
 Lims ID: ic g2  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 13-Jul-2023 14:15:28 ALS Bottle#: 0 Worklist Smp#: 9  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0087436-009  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 13-Jul-2023 19:33:11 Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1662

First Level Reviewer: AR8P Date: 13-Jul-2023 19:23:41

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.784	1.790	-0.006	328085	5.00	5.06	
2 4-Hydroxy-4-methyl-2-pentanone						
2.147	2.148	-0.001	366403	5.00	5.24	
3 2-Butoxyethanol						
2.245	2.249	-0.004	355617	5.00	5.51	
* 4 n-Heptyl Alcohol						
2.435	2.443	-0.008	4396400	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.980	2.979	0.001	29061	5.00	5.67	
6 Propylene glycol						
3.576	3.579	-0.003	108889	5.00	6.09	
7 Ethylene glycol						
3.854	3.849	0.005	179176	5.00	6.13	
8 2-(2-Butoxyethoxy)ethanol						
5.312	5.313	-0.001	278655	5.00	5.38	
9 2,2'-Oxybisethanol						
7.373	7.374	-0.001	144443	5.00	6.02	
10 Triethylene Glycol						
9.591	9.591	0.000	188948	5.00	6.24	M
11 Tetraethylene Glycol						
10.427	10.428	-0.001	281236	10.0	9.40	M

**QC Flag Legend**  
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG\_Gly\_CAL\_00053

Amount Added: 2.50

Units: uL

SG\_GLY\_ISTD\_00124

Amount Added: 10.00

Units: uL

Run Reagent



Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12009.D

Injection Date: 13-Jul-2023 14:15:28

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g2

Worklist Smp#: 9

Client ID:

Injection Vol: 1.0 ul

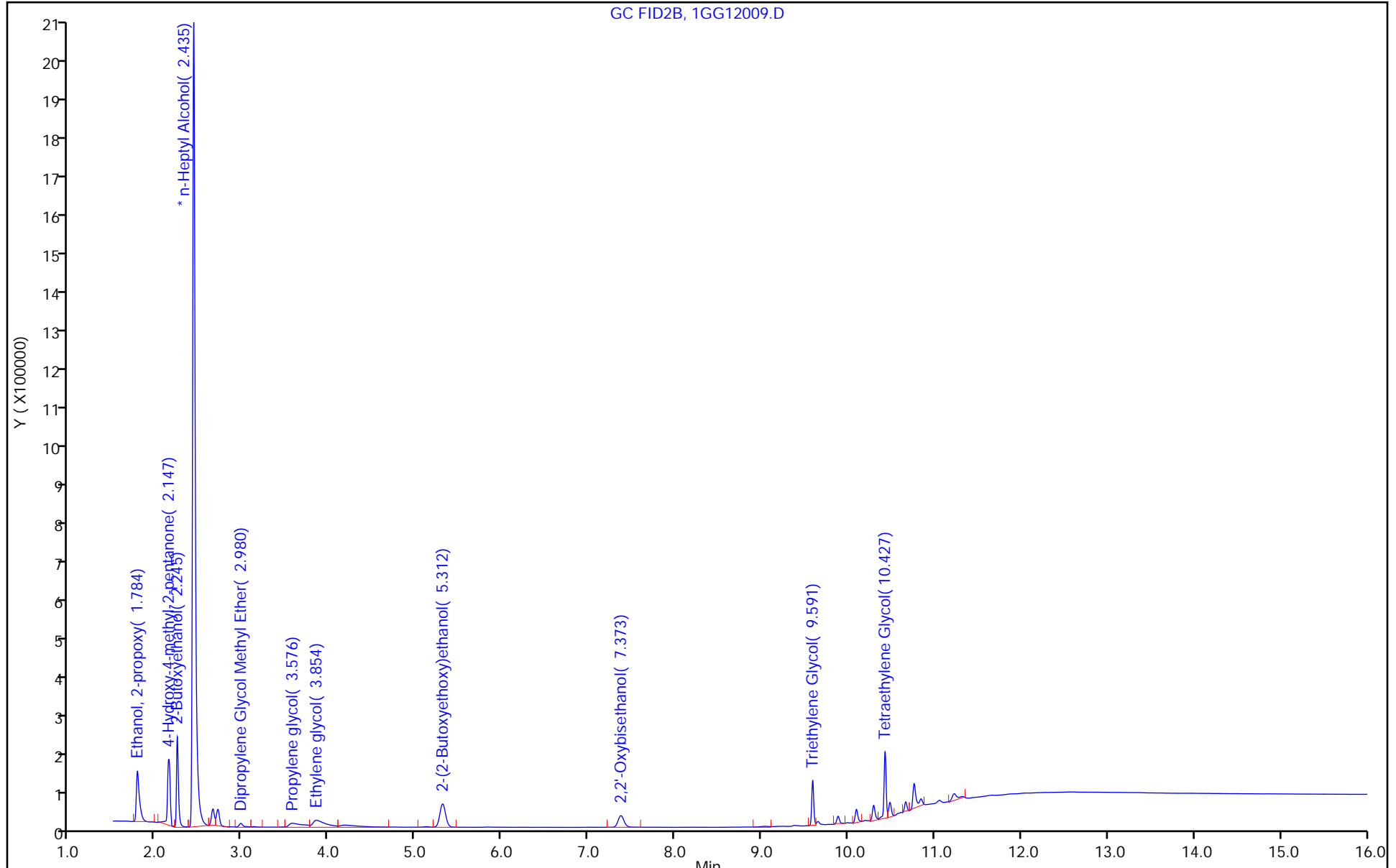
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

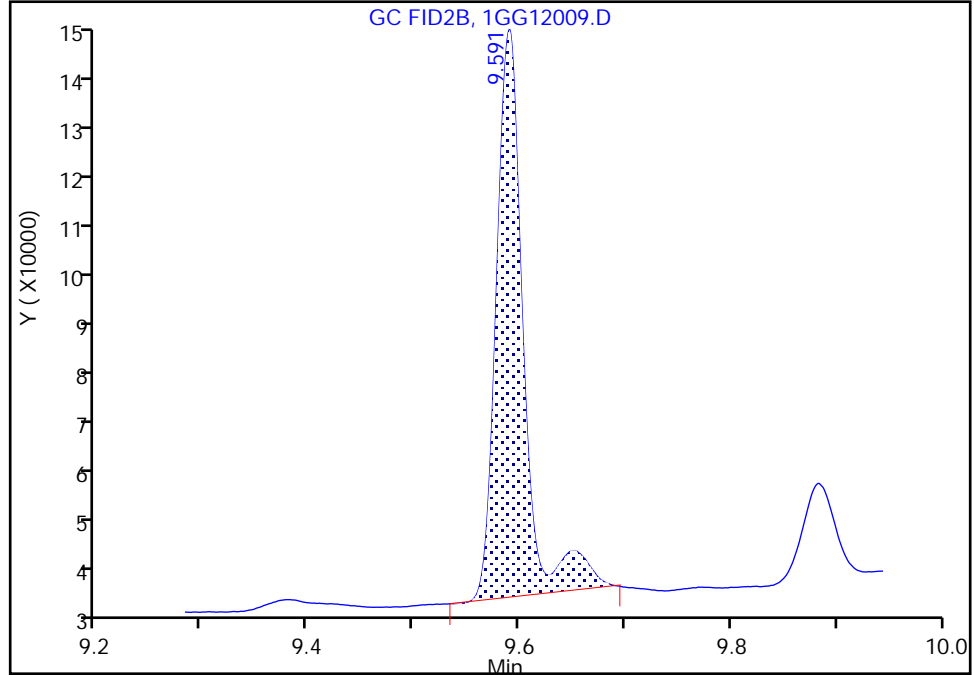
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12009.D  
Injection Date: 13-Jul-2023 14:15:28 Instrument ID: CVGG2  
Lims ID: ic g2  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 9  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

10 Triethylene Glycol, CAS: 112-27-6

Signal: 1

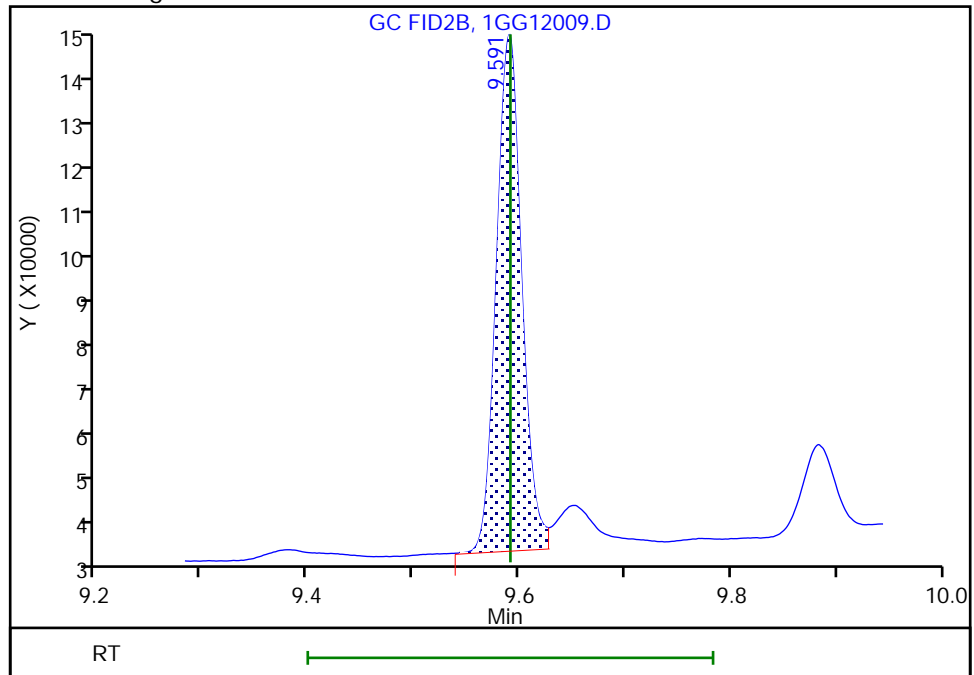
RT: 9.59  
Area: 202829  
Amount: 6.241267  
Amount Units: ug/ml

Processing Integration Results



RT: 9.59  
Area: 188948  
Amount: 6.238825  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Jul-2023 19:25:08 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Shouldering

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Lims ID: ic g1  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 13-Jul-2023 14:38:41 ALS Bottle#: 0 Worklist Smp#: 10  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0087436-010  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 13-Jul-2023 19:33:12 Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1662

First Level Reviewer: AR8P Date: 13-Jul-2023 19:24:53

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.783	1.790	-0.007	157725	2.00	1.41	
2 4-Hydroxy-4-methyl-2-pentanone						
2.143	2.148	-0.005	221110	2.00	1.92	
3 2-Butoxyethanol						
2.246	2.249	-0.003	175525	2.00	1.88	
* 4 n-Heptyl Alcohol						
2.441	2.443	-0.002	4398372	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.975	2.979	-0.004	12682	2.00	1.56	
6 Propylene glycol						
3.573	3.579	-0.006	39866	2.00	2.38	
7 Ethylene glycol						
3.852	3.849	0.003	87868	2.00	3.52	
8 2-(2-Butoxyethoxy)ethanol						
5.313	5.313	0.000	135291	2.00	1.91	
9 2,2'-Oxybisethanol						
7.373	7.374	-0.001	71330	2.00	2.90	
10 Triethylene Glycol						
9.591	9.591	0.000	105822	2.00	2.62	M
11 Tetraethylene Glycol						
10.427	10.428	-0.001	184657	4.00	4.10	M

QC Flag Legend  
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG\_Gly\_CAL\_00053

Amount Added: 1.00

Units: uL

SG\_GLY\_ISTD\_00124

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D

Injection Date: 13-Jul-2023 14:38:41

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g1

Worklist Smp#: 10

Client ID:

Injection Vol: 1.0 ul

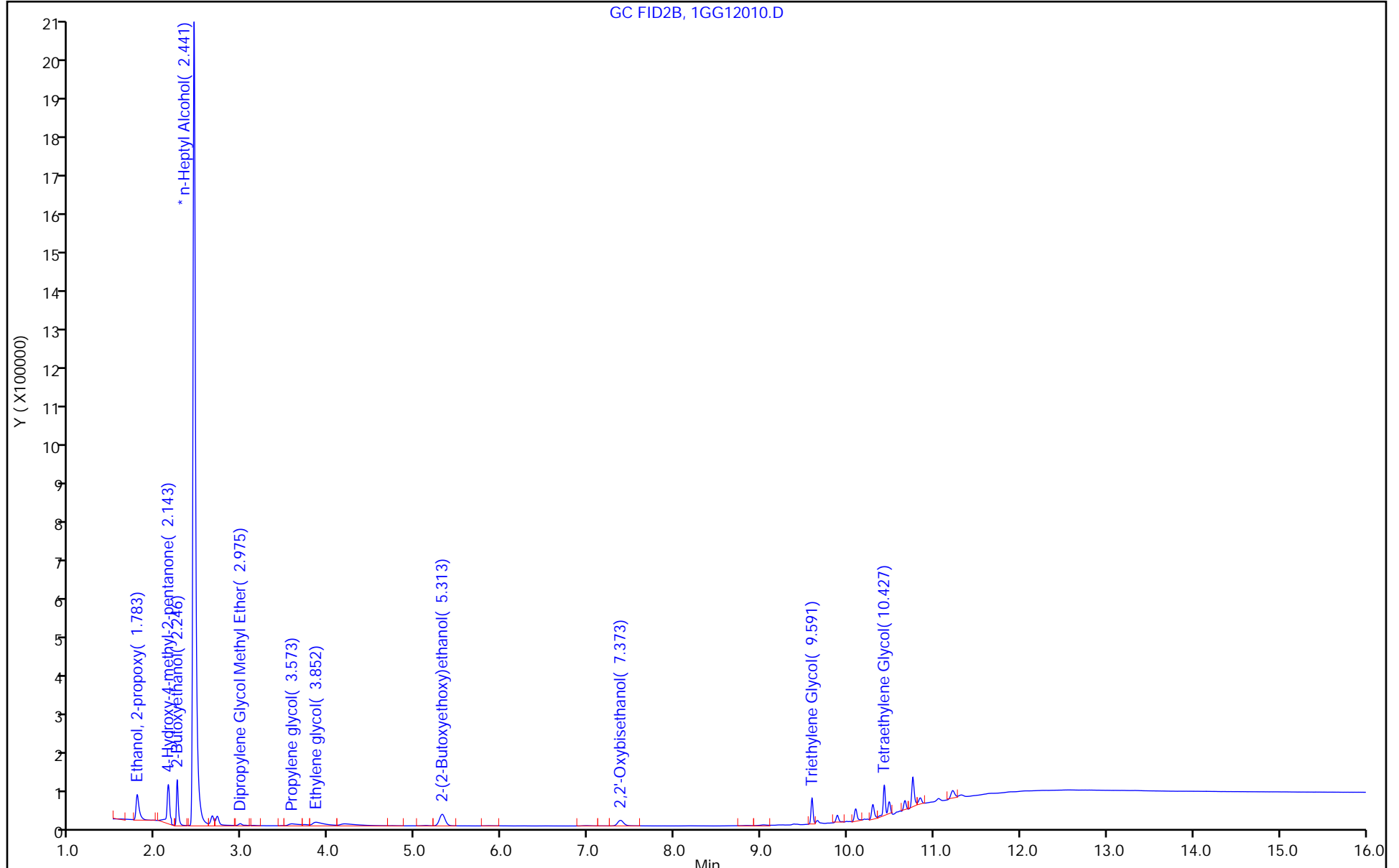
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

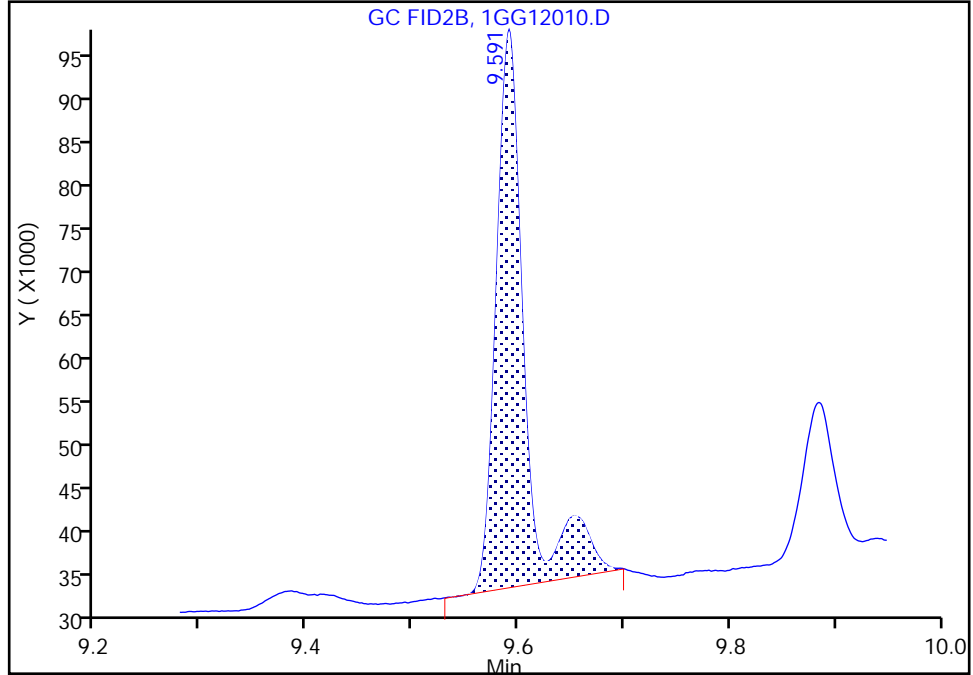
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
Injection Date: 13-Jul-2023 14:38:41 Instrument ID: CVGG2  
Lims ID: ic g1  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 10  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

10 Triethylene Glycol, CAS: 112-27-6

Signal: 1

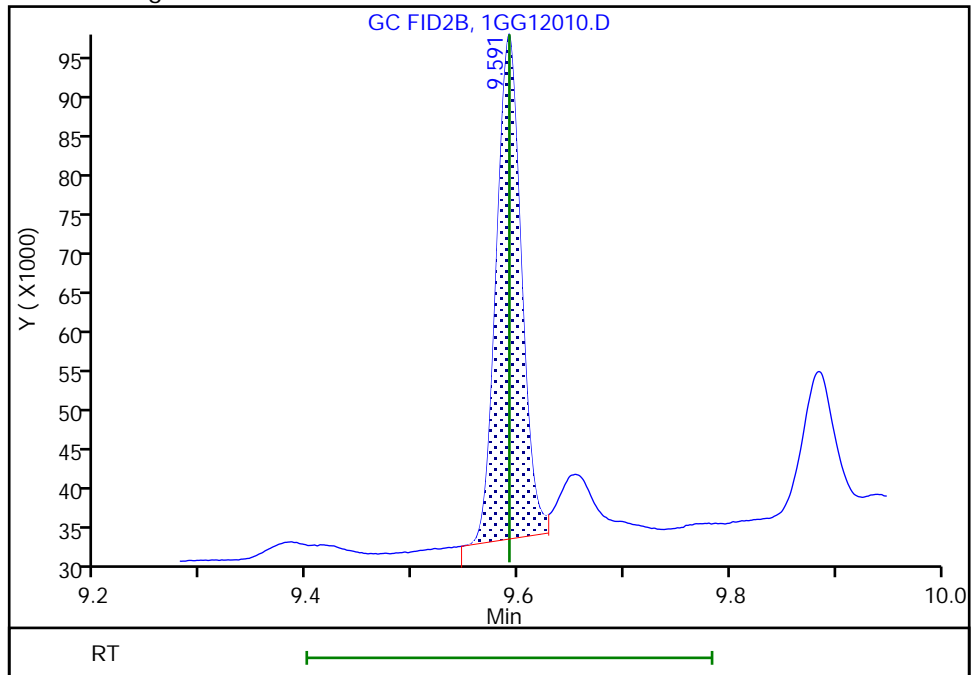
RT: 9.59  
Area: 120510  
Amount: 2.489699  
Amount Units: ug/ml

Processing Integration Results



RT: 9.59  
Area: 105822  
Amount: 2.621869  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Jul-2023 19:24:38 -04:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Shouldering

Calibration

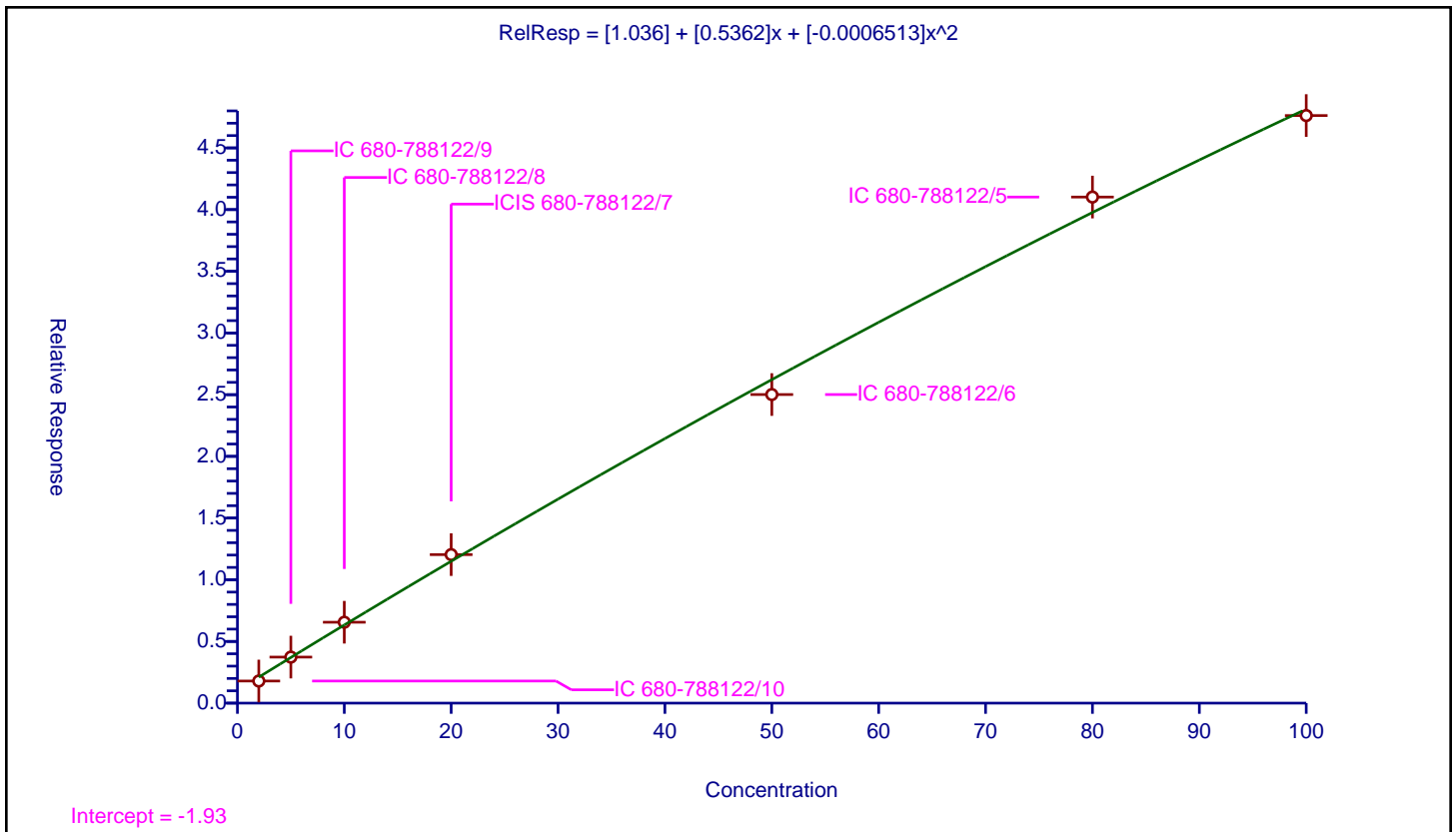
/ Ethanol, 2-propoxy

Curve Type: Quadratic  
 Weighting: None  
 Origin: None  
 Dependency: Response  
 Calib Mode: ISTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	1.036
Slope:	0.5362
Second Order:	-0.0006513

Error Coefficients	
Standard Error:	2780000
Relative Standard Error:	15.4
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-788122/10	2.0	1.792993	50.0	4398372.0	0.896496	Y
2	IC 680-788122/9	5.0	3.731292	50.0	4396400.0	0.746258	Y
3	IC 680-788122/8	10.0	6.556844	50.0	3742624.0	0.655684	Y
4	ICIS 680-788122/7	20.0	12.037768	50.0	4734661.0	0.601888	Y
5	IC 680-788122/6	50.0	25.011388	50.0	4362215.0	0.500228	Y
6	IC 680-788122/5	80.0	41.01739	50.0	3660178.0	0.512717	Y
7	IC 680-788122/4	100.0	47.621323	50.0	4123510.0	0.476213	Y



**Calibration**

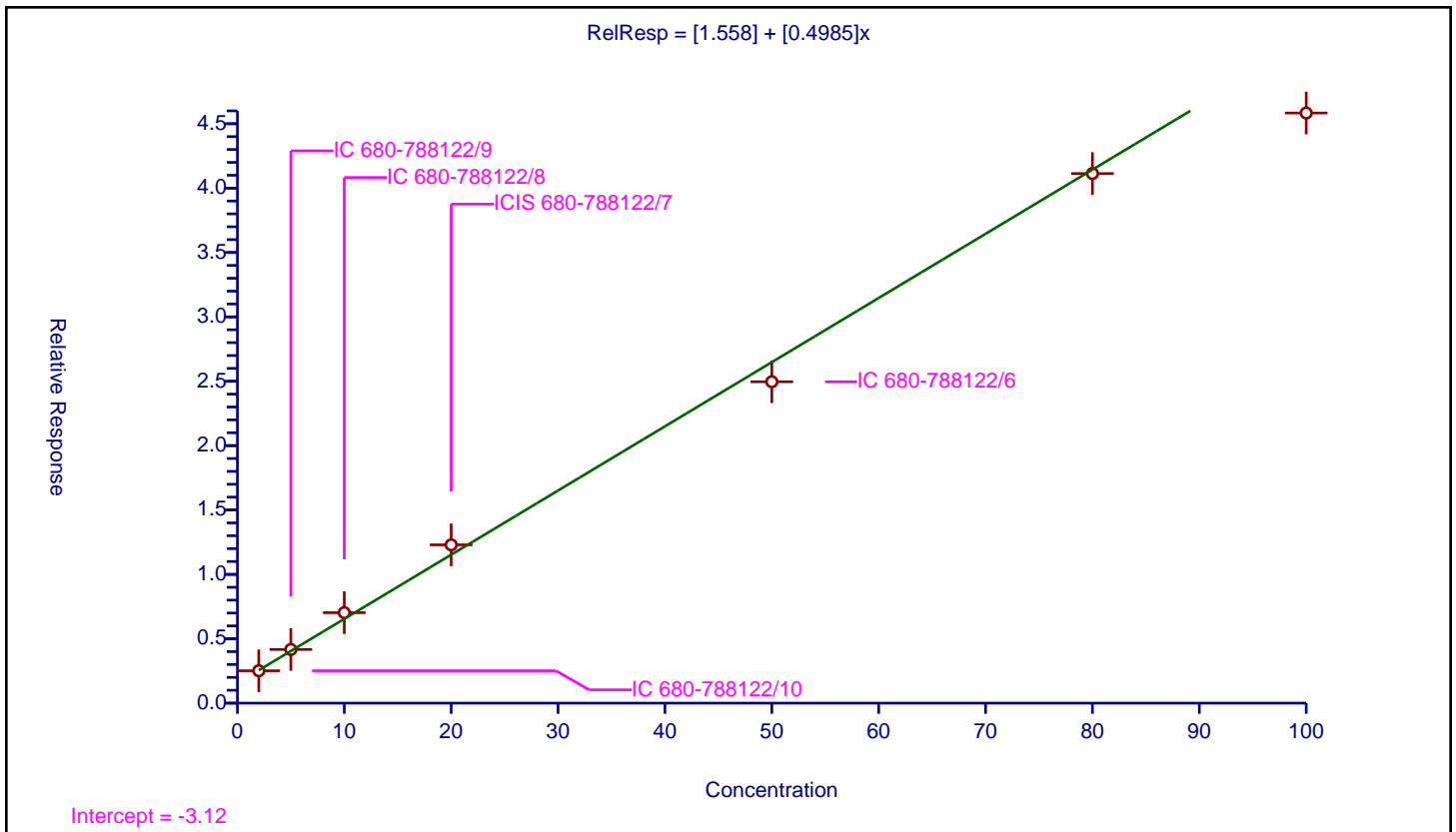
**/ 4-Hydroxy-4-methyl-2-pentanone**

**Curve Type:** Linear  
**Weighting:** Conc\_Sq  
**Origin:** None  
**Dependency:** Response  
**Calib Mode:** ISTD  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
<b>Intercept:</b>	1.558
<b>Slope:</b>	0.4985

Error Coefficients	
<b>Standard Error:</b>	2450000
<b>Relative Standard Error:</b>	8.4
<b>Correlation Coefficient:</b>	0.992
<b>Coefficient of Determination (Adjusted):</b>	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-788122/10	2.0	2.513544	50.0	4398372.0	1.256772	Y
2	IC 680-788122/9	5.0	4.16708	50.0	4396400.0	0.833416	Y
3	IC 680-788122/8	10.0	7.027115	50.0	3742624.0	0.702712	Y
4	ICIS 680-788122/7	20.0	12.295041	50.0	4734661.0	0.614752	Y
5	IC 680-788122/6	50.0	24.961998	50.0	4362215.0	0.49924	Y
6	IC 680-788122/5	80.0	41.131456	50.0	3660178.0	0.514143	Y
7	IC 680-788122/4	100.0	45.834289	50.0	4123510.0	0.458343	Y





Calibration

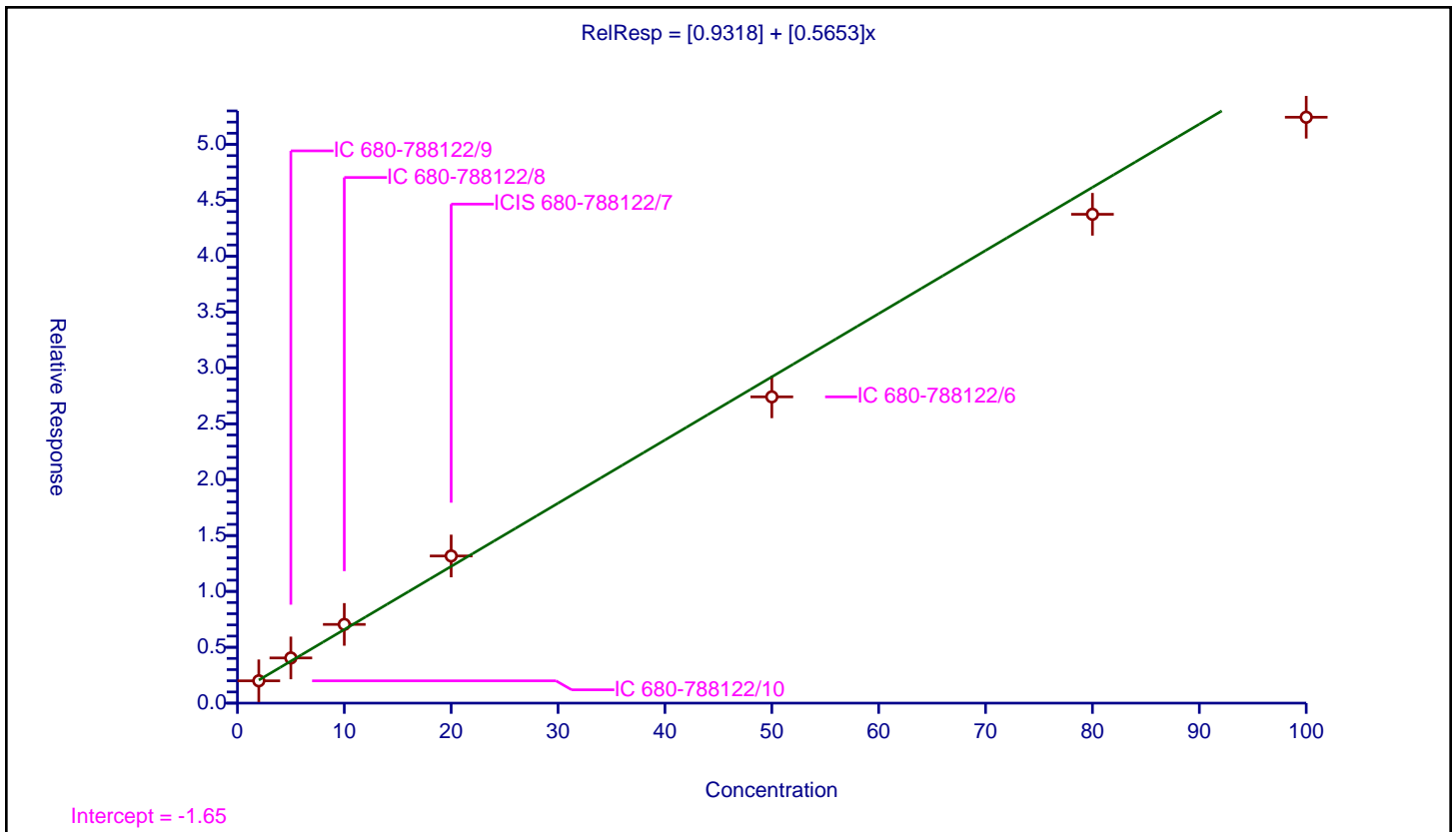
/ 2-Butoxyethanol

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: ISTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.9318
Slope:	0.5653

Error Coefficients	
Standard Error:	2710000
Relative Standard Error:	9.2
Correlation Coefficient:	0.989
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-788122/10	2.0	1.995341	50.0	4398372.0	0.99767	Y
2	IC 680-788122/9	5.0	4.044411	50.0	4396400.0	0.808882	Y
3	IC 680-788122/8	10.0	7.045124	50.0	3742624.0	0.704512	Y
4	ICIS 680-788122/7	20.0	13.17088	50.0	4734661.0	0.658544	Y
5	IC 680-788122/6	50.0	27.409688	50.0	4362215.0	0.548194	Y
6	IC 680-788122/5	80.0	43.747012	50.0	3660178.0	0.546838	Y
7	IC 680-788122/4	100.0	52.431824	50.0	4123510.0	0.524318	Y



Calibration

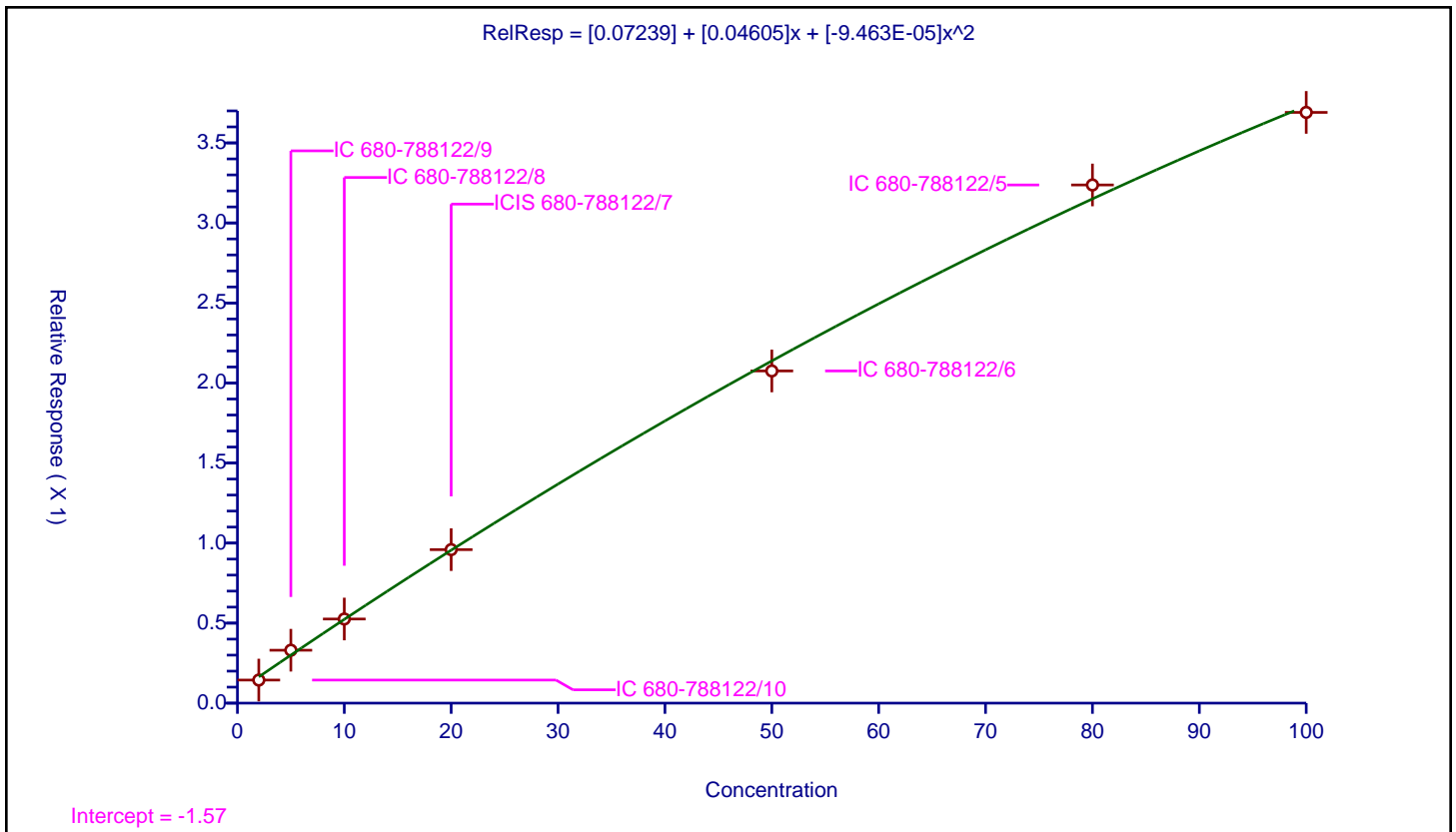
/ Dipropylene Glycol Methyl Ether

Curve Type: Quadratic  
 Weighting: None  
 Origin: None  
 Dependency: Response  
 Calib Mode: ISTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.07239
Slope:	0.04605
Second Order:	-9.463E-05

Error Coefficients	
Standard Error:	219000
Relative Standard Error:	13.1
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-788122/10	2.0	0.144167	50.0	4398372.0	0.072083	Y
2	IC 680-788122/9	5.0	0.330509	50.0	4396400.0	0.066102	Y
3	IC 680-788122/8	10.0	0.525567	50.0	3742624.0	0.052557	Y
4	ICIS 680-788122/7	20.0	0.959076	50.0	4734661.0	0.047954	Y
5	IC 680-788122/6	50.0	2.075276	50.0	4362215.0	0.041506	Y
6	IC 680-788122/5	80.0	3.237247	50.0	3660178.0	0.040466	Y
7	IC 680-788122/4	100.0	3.690594	50.0	4123510.0	0.036906	Y



**Calibration**

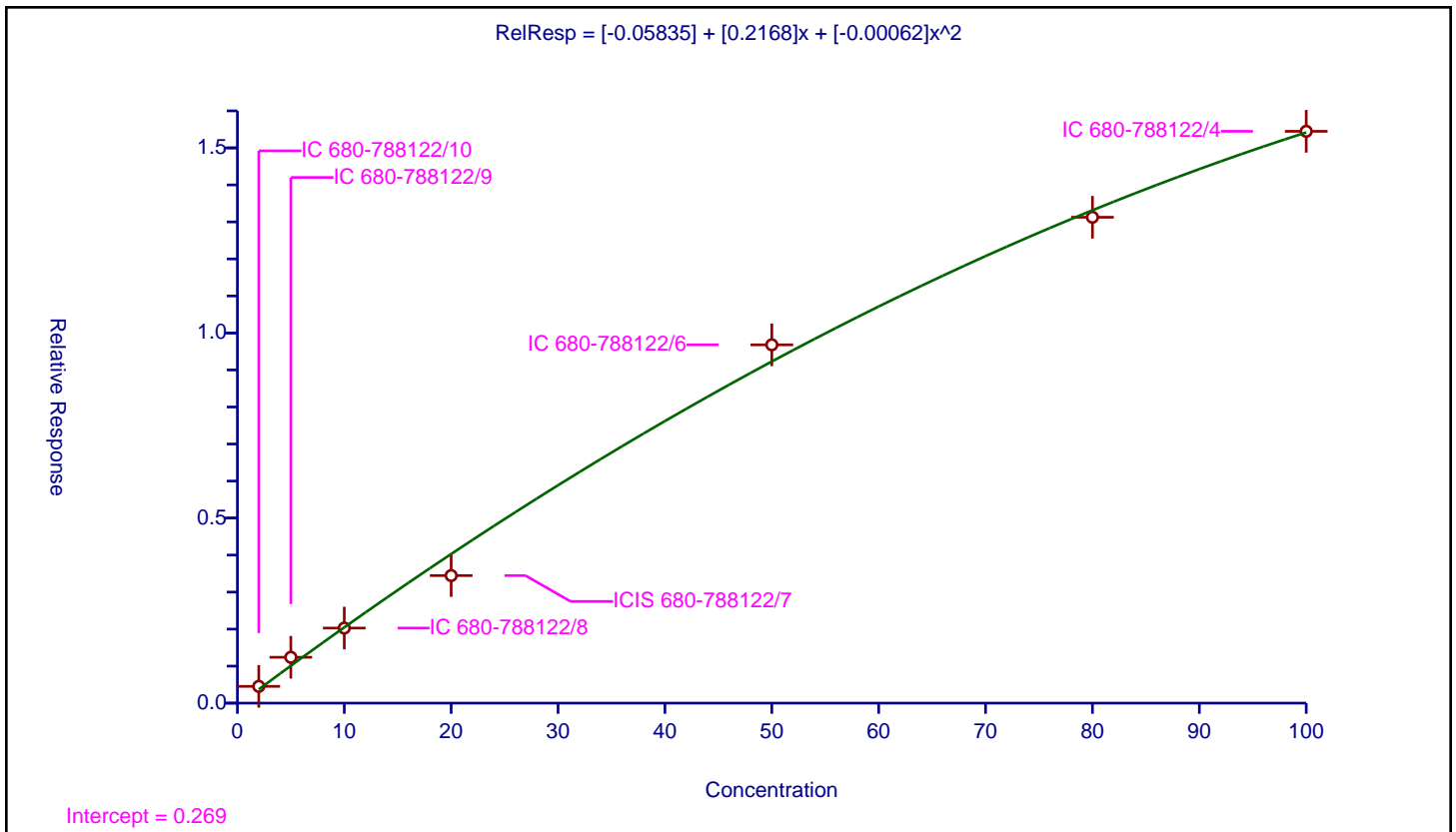
**/ Propylene glycol**

Curve Type: Quadratic  
 Weighting: None  
 Origin: None  
 Dependency: Response  
 Calib Mode: ISTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	-0.05835
Slope:	0.2168
Second Order:	-0.00062

Error Coefficients	
Standard Error:	922000
Relative Standard Error:	16.5
Correlation Coefficient:	0.983
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-788122/10	2.0	0.45319	50.0	4398372.0	0.226595	Y
2	IC 680-788122/9	5.0	1.238388	50.0	4396400.0	0.247678	Y
3	IC 680-788122/8	10.0	2.027855	50.0	3742624.0	0.202786	Y
4	ICIS 680-788122/7	20.0	3.446192	50.0	4734661.0	0.17231	Y
5	IC 680-788122/6	50.0	9.680071	50.0	4362215.0	0.193601	Y
6	IC 680-788122/5	80.0	13.126315	50.0	3660178.0	0.164079	Y
7	IC 680-788122/4	100.0	15.448138	50.0	4123510.0	0.154481	Y



**Calibration**

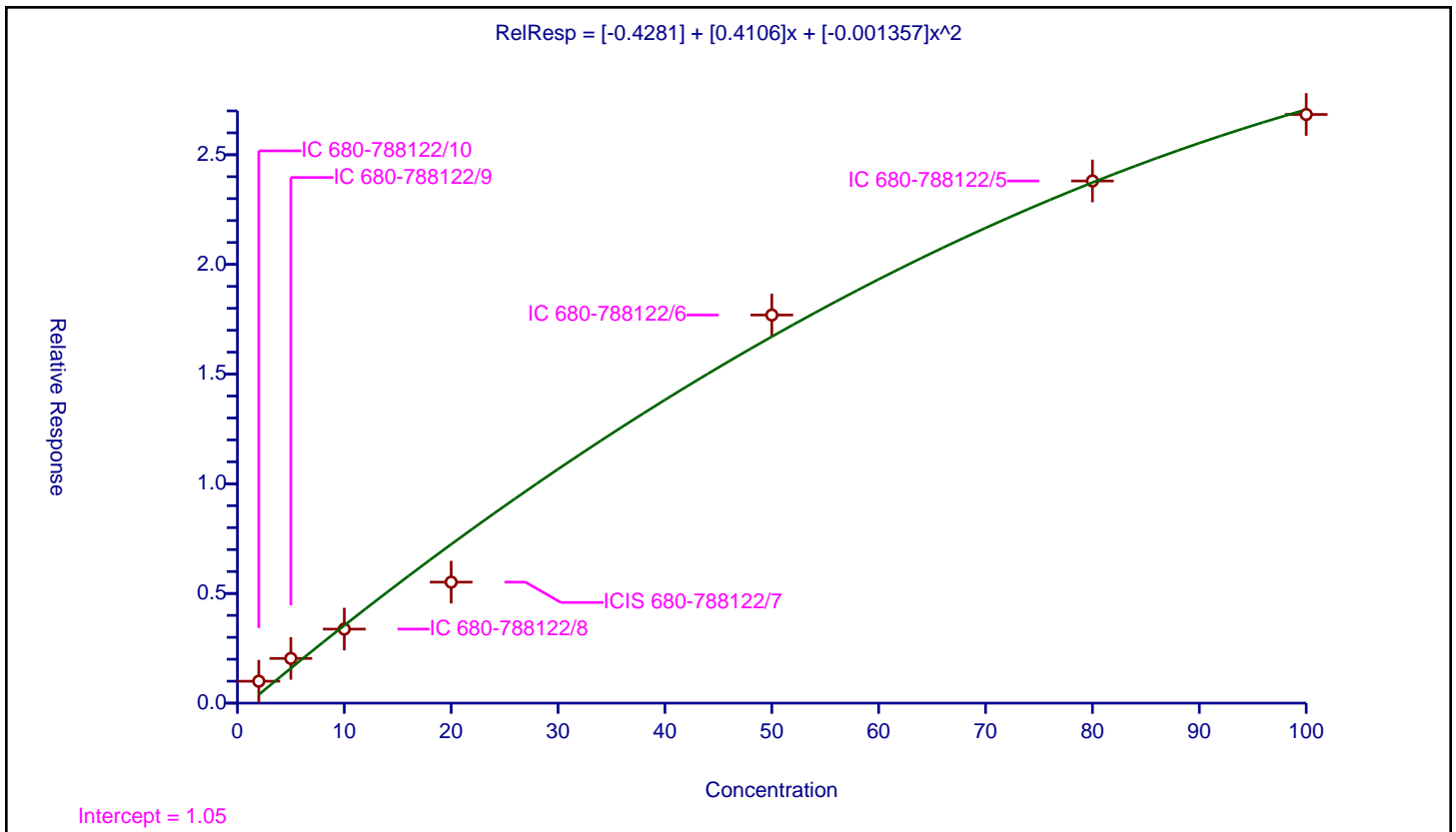
/ Ethylene glycol

Curve Type: Quadratic  
 Weighting: None  
 Origin: None  
 Dependency: Response  
 Calib Mode: ISTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	-0.4281
Slope:	0.4106
Second Order:	-0.001357

Error Coefficients	
Standard Error:	1640000
Relative Standard Error:	41.5
Correlation Coefficient:	0.983
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-788122/10	2.0	0.99887	50.0	4398372.0	0.499435	Y
2	IC 680-788122/9	5.0	2.037758	50.0	4396400.0	0.407552	Y
3	IC 680-788122/8	10.0	3.374918	50.0	3742624.0	0.337492	Y
4	ICIS 680-788122/7	20.0	5.515706	50.0	4734661.0	0.275785	Y
5	IC 680-788122/6	50.0	17.69452	50.0	4362215.0	0.35389	Y
6	IC 680-788122/5	80.0	23.805632	50.0	3660178.0	0.29757	Y
7	IC 680-788122/4	100.0	26.837743	50.0	4123510.0	0.268377	Y



Calibration

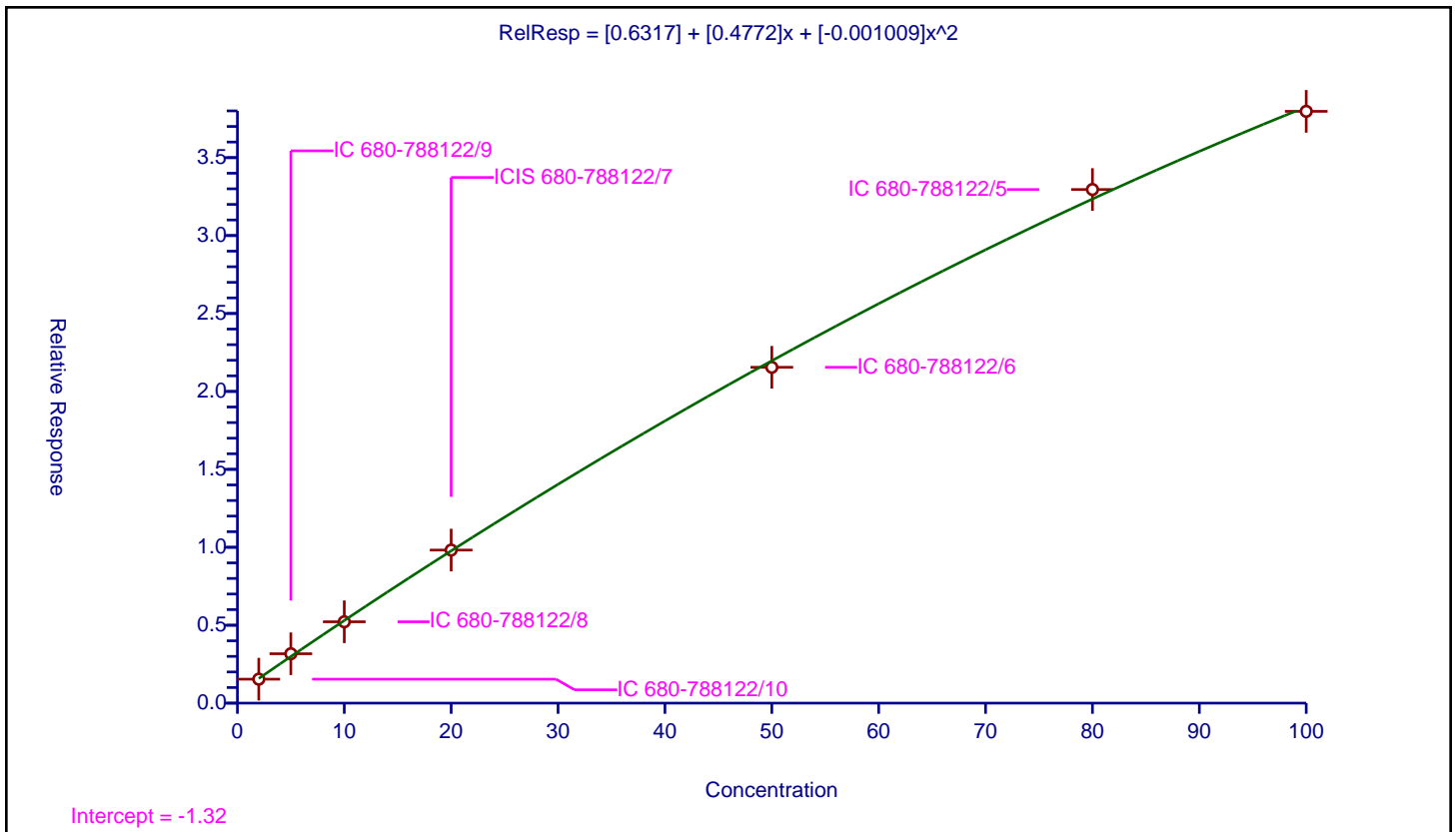
/ 2-(2-Butoxyethoxy)ethanol

Curve Type: Quadratic  
 Weighting: None  
 Origin: None  
 Dependency: Response  
 Calib Mode: ISTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.6317
Slope:	0.4772
Second Order:	-0.001009

Error Coefficients	
Standard Error:	2250000
Relative Standard Error:	4.9
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-788122/10	2.0	1.537967	50.0	4398372.0	0.768983	Y
2	IC 680-788122/9	5.0	3.169127	50.0	4396400.0	0.633825	Y
3	IC 680-788122/8	10.0	5.219159	50.0	3742624.0	0.521916	Y
4	ICIS 680-788122/7	20.0	9.820703	50.0	4734661.0	0.491035	Y
5	IC 680-788122/6	50.0	21.547539	50.0	4362215.0	0.430951	Y
6	IC 680-788122/5	80.0	32.954886	50.0	3660178.0	0.411936	Y
7	IC 680-788122/4	100.0	37.971582	50.0	4123510.0	0.379716	Y



Calibration

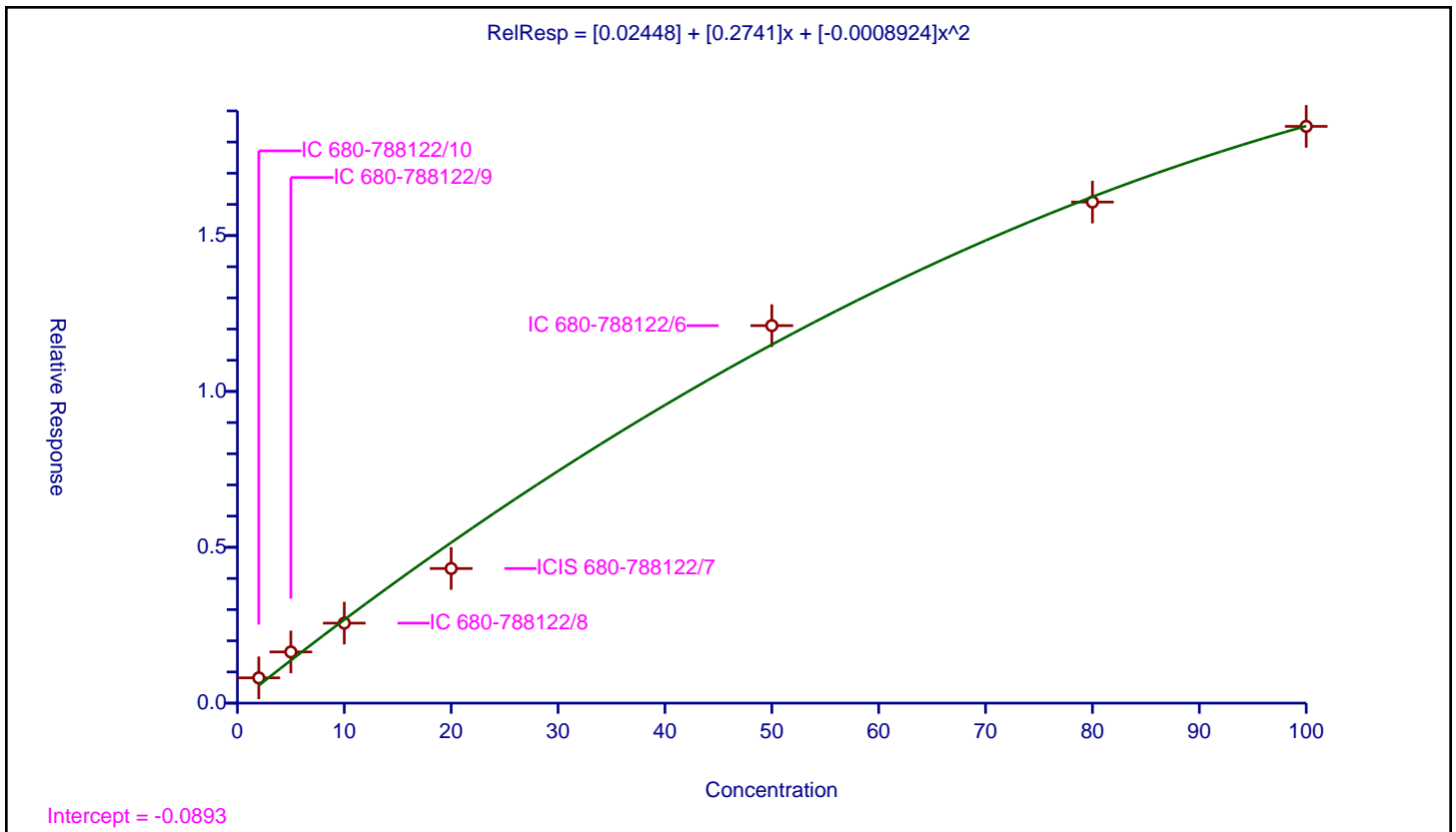
/ 2,2'-Oxybisethanol

Curve Type: Quadratic  
 Weighting: None  
 Origin: None  
 Dependency: Response  
 Calib Mode: ISTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.02448
Slope:	0.2741
Second Order:	-0.0008924

Error Coefficients	
Standard Error:	1120000
Relative Standard Error:	26.4
Correlation Coefficient:	0.982
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-788122/10	2.0	0.810868	50.0	4398372.0	0.405434	Y
2	IC 680-788122/9	5.0	1.642742	50.0	4396400.0	0.328548	Y
3	IC 680-788122/8	10.0	2.566595	50.0	3742624.0	0.256659	Y
4	ICIS 680-788122/7	20.0	4.31843	50.0	4734661.0	0.215921	Y
5	IC 680-788122/6	50.0	12.110316	50.0	4362215.0	0.242206	Y
6	IC 680-788122/5	80.0	16.074956	50.0	3660178.0	0.200937	Y
7	IC 680-788122/4	100.0	18.50375	50.0	4123510.0	0.185038	Y



Calibration

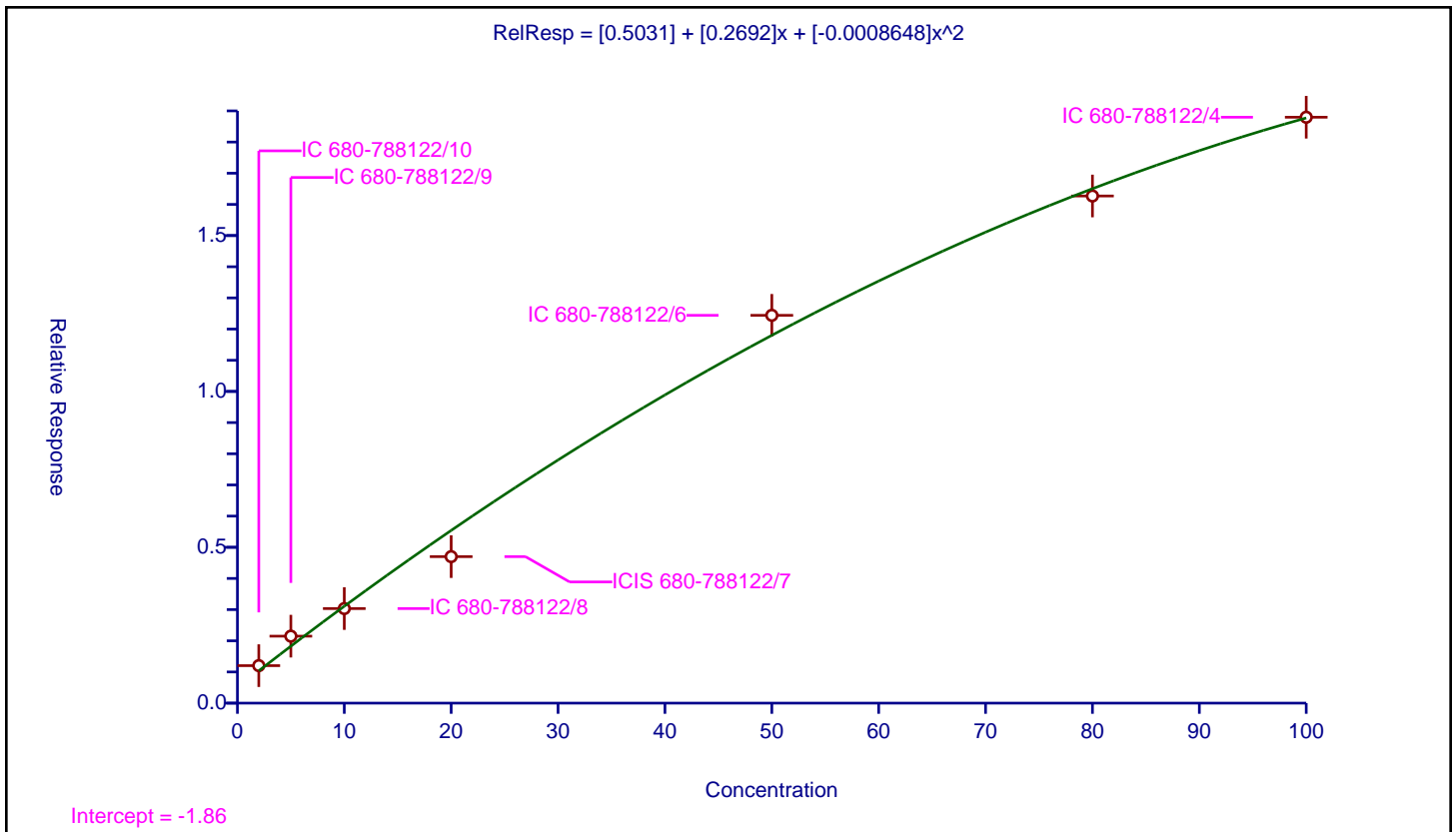
/ Triethylene Glycol

Curve Type: Quadratic  
 Weighting: None  
 Origin: None  
 Dependency: Response  
 Calib Mode: ISTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.5031
Slope:	0.2692
Second Order:	-0.0008648

Error Coefficients	
Standard Error:	1150000
Relative Standard Error:	22.1
Correlation Coefficient:	0.980
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-788122/10	2.0	1.202968	50.0	4398372.0	0.601484	Y
2	IC 680-788122/9	5.0	2.148895	50.0	4396400.0	0.429779	Y
3	IC 680-788122/8	10.0	3.033393	50.0	3742624.0	0.303339	Y
4	ICIS 680-788122/7	20.0	4.699608	50.0	4734661.0	0.23498	Y
5	IC 680-788122/6	50.0	12.441317	50.0	4362215.0	0.248826	Y
6	IC 680-788122/5	80.0	16.27022	50.0	3660178.0	0.203378	Y
7	IC 680-788122/4	100.0	18.796474	50.0	4123510.0	0.187965	Y



**Calibration**

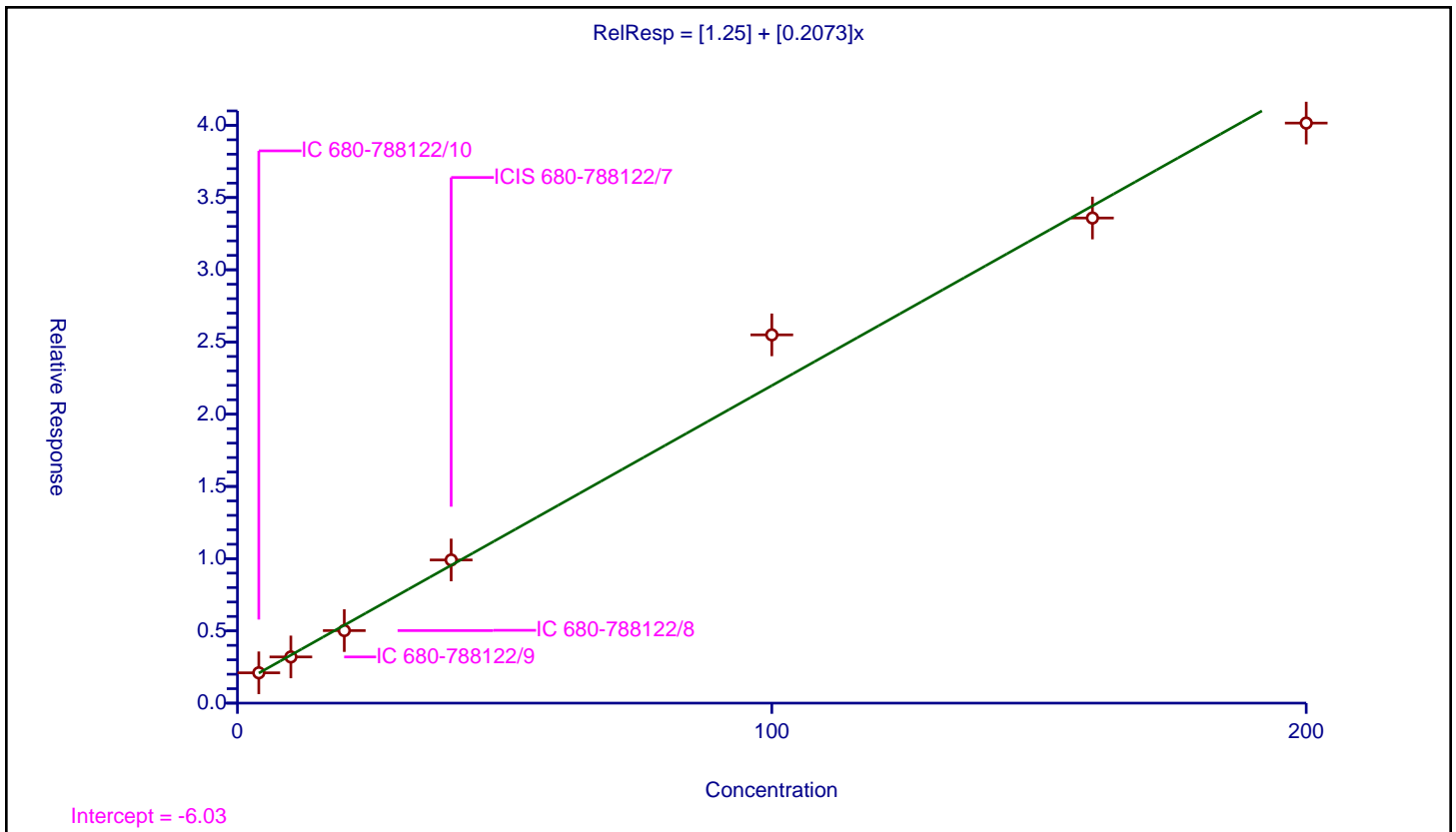
/ Tetraethylene Glycol

Curve Type: Linear  
 Weighting: Conc  
 Origin: None  
 Dependency: Response  
 Calib Mode: ISTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	1.25
Slope:	0.2073

Error Coefficients	
Standard Error:	2150000
Relative Standard Error:	9.7
Correlation Coefficient:	0.967
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-788122/10	4.0	2.099152	50.0	4398372.0	0.524788	Y
2	IC 680-788122/9	10.0	3.198481	50.0	4396400.0	0.319848	Y
3	IC 680-788122/8	20.0	5.021704	50.0	3742624.0	0.251085	Y
4	ICIS 680-788122/7	40.0	9.91072	50.0	4734661.0	0.247768	Y
5	IC 680-788122/6	100.0	25.495683	50.0	4362215.0	0.254957	Y
6	IC 680-788122/5	160.0	33.584897	50.0	3660178.0	0.209906	Y
7	IC 680-788122/4	200.0	40.157099	50.0	4123510.0	0.200785	Y





FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 680-788122/11 Calibration Date: 07/13/2023 15:01  
 Instrument ID: CVGG2 Calib Start Date: 07/13/2023 12:19  
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 07/13/2023 14:38  
 Lab File ID: 1GG12011.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Qua		0.6315		22.2	20.0	11.1	20.0
4-Hydroxy-4-methyl-2-pentano ne	Lin2		0.6505		23.0	20.0	14.9	20.0
2-Butoxyethanol	Lin2		0.7152		23.7	20.0	18.3	20.0
Dipropylene Glycol Methyl Ether	Qua		0.0489		20.5	20.0	2.6	20.0
Propylene glycol	Qua		0.1875		18.6	20.0	-7.2	20.0
Ethylene glycol	Qua		0.3140		17.3	20.0	-13.4	20.0
2-(2-Butoxyethoxy)ethanol	Qua		0.5165		21.3	20.0	6.4	20.0
2,2'-Oxybisethanol	Qua		0.2438		18.9	20.0	-5.7	20.0
Triethylene Glycol	Qua		0.3063		22.5	20.0	12.6	20.0
Tetraethylene Glycol	Lin1		0.2786		47.7	40.0	19.3	20.0

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 680-788122/11 Calibration Date: 07/13/2023 15:01  
 Instrument ID: CVGG2 Calib Start Date: 07/13/2023 12:19  
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 07/13/2023 14:38  
 Lab File ID: 1GG12011.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	1.78	1.75	1.83
4-Hydroxy-4-methyl-2-pentanone	2.15	2.11	2.19
2-Butoxyethanol	2.24	2.20	2.29
Dipropylene Glycol Methyl Ether	2.98	2.92	3.04
Propylene glycol	3.57	3.51	3.65
Ethylene glycol	3.85	3.77	3.93
2-(2-Butoxyethoxy)ethanol	5.31	5.21	5.42
2,2'-Oxybisethanol	7.37	7.23	7.52
Triethylene Glycol	9.59	9.40	9.78
Tetraethylene Glycol	10.43	10.22	10.64

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12011.D  
 Lims ID: icv gly  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 13-Jul-2023 15:01:47 ALS Bottle#: 0 Worklist Smp#: 11  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0087436-011  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 18-Jul-2023 09:23:16 Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1674

First Level Reviewer: AR8P Date: 13-Jul-2023 19:29:15

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.784	1.790	-0.006	1003277	20.0	22.2	
2 4-Hydroxy-4-methyl-2-pentanone						
2.146	2.148	-0.002	1033455	20.0	23.0	
3 2-Butoxyethanol						
2.244	2.249	-0.005	1136252	20.0	23.7	
* 4 n-Heptyl Alcohol						
2.435	2.443	-0.008	3971826	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.979	2.979	0.000	77626	20.0	20.5	
6 Propylene glycol						
3.573	3.579	-0.006	297944	20.0	18.6	
7 Ethylene glycol						
3.849	3.849	0.000	498820	20.0	17.3	
8 2-(2-Butoxyethoxy)ethanol						
5.313	5.313	0.000	820506	20.0	21.3	
9 2,2'-Oxybisethanol						
7.373	7.374	-0.001	387362	20.0	18.9	
10 Triethylene Glycol						
9.590	9.591	-0.001	486673	20.0	22.5	
11 Tetraethylene Glycol						
10.428	10.428	0.000	885091	40.0	47.7	

QC Flag Legend  
Processing Flags

Reagents:

SG\_GlyICV\_00061

Amount Added: 10.00

Units: uL

SG\_GLY\_ISTD\_00124

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12011.D

Injection Date: 13-Jul-2023 15:01:47

Instrument ID: CVGG2

Operator ID:

Lims ID: icv gly

Worklist Smp#: 11

Client ID:

Injection Vol: 1.0 ul

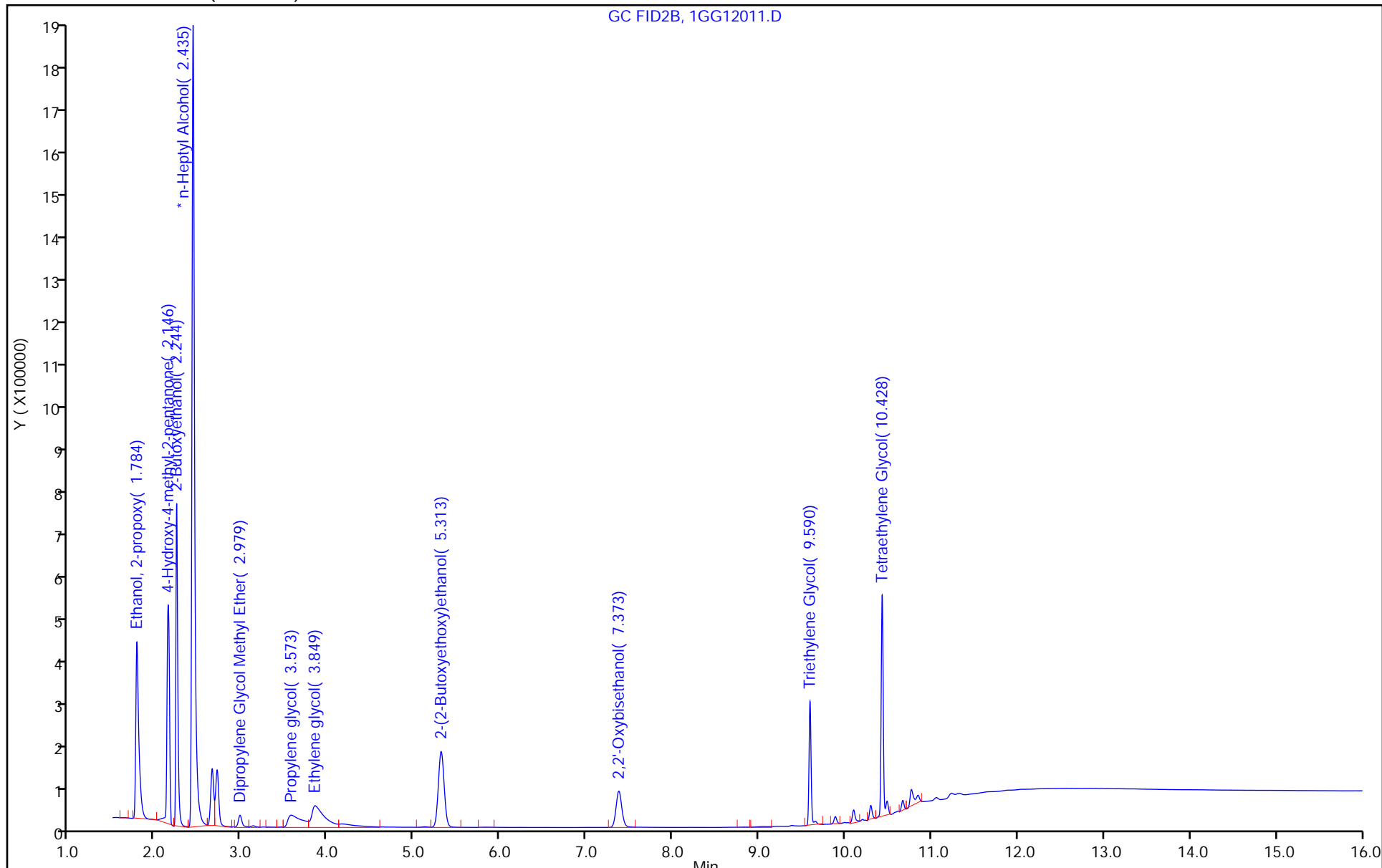
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 680-792737/4 Calibration Date: 08/10/2023 12:24  
 Instrument ID: CVGG2 Calib Start Date: 07/13/2023 12:19  
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 07/13/2023 14:38  
 Lab File ID: 1GH10004.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Qua		0.5942		20.8	20.0	3.8	20.0
4-Hydroxy-4-methyl-2-pentano ne	Lin2		0.5308		18.2	20.0	-9.1	20.0
2-Butoxyethanol	Lin2		0.5876		19.1	20.0	-4.3	20.0
Dipropylene Glycol Methyl Ether	Qua		0.0486		20.4	20.0	1.9	20.0
Propylene glycol	Qua		0.1656		16.3	20.0	-18.5	20.0
Ethylene glycol	Qua		0.2474		13.7	20.0	-31.4*	20.0
2-(2-Butoxyethoxy)ethanol	Qua		0.4944		20.3	20.0	1.3	20.0
2,2'-Oxybisethanol	Qua		0.1911		14.5	20.0	-27.3*	20.0
Triethylene Glycol	Qua		0.2014		13.7	20.0	-31.5*	20.0
Tetraethylene Glycol	Lin1		0.1670		26.2	40.0	-34.5*	20.0

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 680-792737/4 Calibration Date: 08/10/2023 12:24  
 Instrument ID: CVGG2 Calib Start Date: 07/13/2023 12:19  
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 07/13/2023 14:38  
 Lab File ID: 1GH10004.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	1.76	1.72	1.79
4-Hydroxy-4-methyl-2-pentanone	2.13	2.08	2.17
2-Butoxyethanol	2.23	2.18	2.27
Dipropylene Glycol Methyl Ether	2.92	2.86	2.98
Propylene glycol	3.52	3.45	3.59
Ethylene glycol	3.79	3.71	3.86
2-(2-Butoxyethoxy)ethanol	5.19	5.09	5.30
2,2'-Oxybisethanol	7.24	7.10	7.39
Triethylene Glycol	9.55	9.36	9.74
Tetraethylene Glycol	10.39	10.18	10.60

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10004.D  
 Lims ID: ccvis  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 10-Aug-2023 12:24:48 ALS Bottle#: 0 Worklist Smp#: 4  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0088172-004  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 10-Aug-2023 23:22:06 Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1650

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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1 Ethanol, 2-propoxy						
1.756	1.756	0.000	836434	20.0	20.8	
2 4-Hydroxy-4-methyl-2-pentanone						
2.125	2.125	0.000	747203	20.0	18.2	
3 2-Butoxyethanol						
2.225	2.225	0.000	827193	20.0	19.1	
* 4 n-Heptyl Alcohol						
2.405	2.405	0.000	3519426	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.920	2.920	0.000	68368	20.0	20.4	
6 Propylene glycol						
3.522	3.522	0.000	233064	20.0	16.3	
7 Ethylene glycol						
3.788	3.788	0.000	348240	20.0	13.7	
8 2-(2-Butoxyethoxy)ethanol						
5.193	5.193	0.000	696048	20.0	20.3	
9 2,2'-Oxybisethanol						
7.243	7.243	0.000	268963	20.0	14.5	
10 Triethylene Glycol						
9.548	9.548	0.000	283455	20.0	13.7	
11 Tetraethylene Glycol						
10.387	10.387	0.000	470109	40.0	26.2	

**Reagents:**

SG\_Gly\_CAL\_00053 Amount Added: 10.00 Units: uL  
 SG\_GLY\_ISTD\_00127 Amount Added: 10.00 Units: uL Run Reagent



Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10004.D

Injection Date: 10-Aug-2023 12:24:48

Instrument ID: CVGG2

Operator ID:

Lims ID: ccvis

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

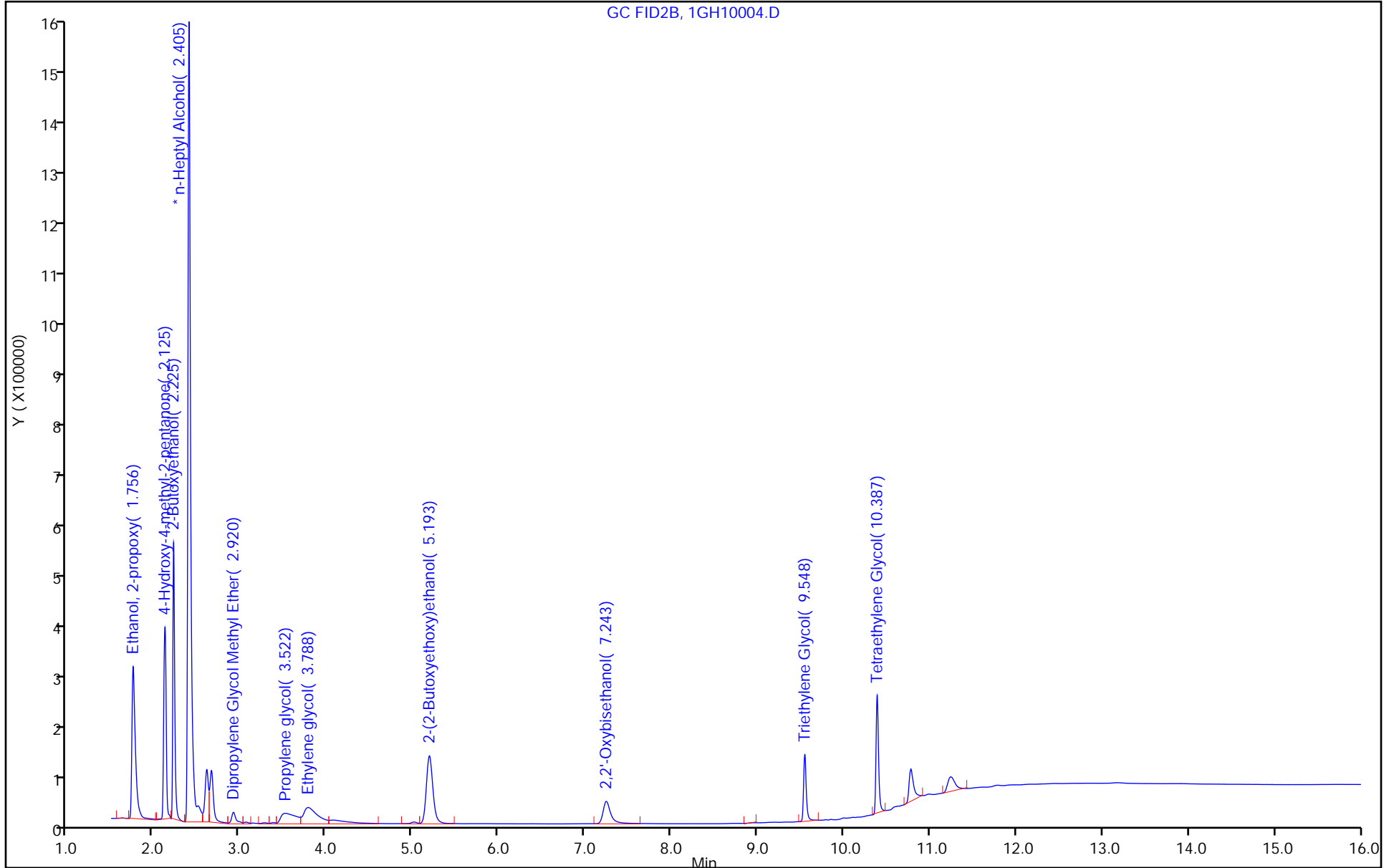
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 680-792737/26 Calibration Date: 08/10/2023 23:09  
 Instrument ID: CVGG2 Calib Start Date: 07/13/2023 12:19  
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 07/13/2023 14:38  
 Lab File ID: 1GH10026.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Qua		0.7145		25.5	20.0	27.5*	20.0
4-Hydroxy-4-methyl-2-pentano ne	Lin2		0.6169		21.6	20.0	8.1	20.0
2-Butoxyethanol	Lin2		0.7113		23.5	20.0	17.6	20.0
Dipropylene Glycol Methyl Ether	Qua		0.0562		24.0	20.0	20.2*	20.0
Propylene glycol	Qua		0.1830		18.1	20.0	-9.6	20.0
Ethylene glycol	Qua		0.2830		15.6	20.0	-21.8*	20.0
2-(2-Butoxyethoxy)ethanol	Qua		0.5454		22.6	20.0	13.1	20.0
2,2'-Oxybisethanol	Qua		0.1924		14.6	20.0	-26.8*	20.0
Triethylene Glycol	Qua		0.1499		9.56	20.0	-52.2*	20.0
Tetraethylene Glycol	Lin1		0.0907		11.5	40.0	-71.3*	20.0

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 680-792737/26 Calibration Date: 08/10/2023 23:09  
 Instrument ID: CVGG2 Calib Start Date: 07/13/2023 12:19  
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 07/13/2023 14:38  
 Lab File ID: 1GH10026.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	1.74	1.71	1.78
4-Hydroxy-4-methyl-2-pentanone	2.12	2.08	2.16
2-Butoxyethanol	2.22	2.17	2.26
Dipropylene Glycol Methyl Ether	2.91	2.86	2.97
Propylene glycol	3.53	3.46	3.60
Ethylene glycol	3.78	3.71	3.86
2-(2-Butoxyethoxy)ethanol	5.19	5.08	5.29
2,2'-Oxybisethanol	7.25	7.10	7.39
Triethylene Glycol	9.55	9.36	9.74
Tetraethylene Glycol	10.39	10.18	10.59

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10026.D  
 Lims ID: ccv I4  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 10-Aug-2023 23:09:52 ALS Bottle#: 0 Worklist Smp#: 26  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0088172-004  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 10-Aug-2023 23:30:52 Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1650

First Level Reviewer: AR8P

Date: 10-Aug-2023 23:30:49

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.744	1.744	0.000	1204973	20.0	25.5	
2 4-Hydroxy-4-methyl-2-pentanone						
2.117	2.117	0.000	1040434	20.0	21.6	
3 2-Butoxyethanol						
2.218	2.218	0.000	1199607	20.0	23.5	
* 4 n-Heptyl Alcohol						
2.395	2.395	0.000	4216152	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.914	2.914	0.000	94829	20.0	24.0	
6 Propylene glycol						
3.531	3.531	0.000	308557	20.0	18.1	
7 Ethylene glycol						
3.783	3.783	0.000	477245	20.0	15.6	
8 2-(2-Butoxyethoxy)ethanol						
5.188	5.188	0.000	919838	20.0	22.6	
9 2,2'-Oxybisethanol						
7.245	7.245	0.000	324437	20.0	14.6	
10 Triethylene Glycol						
9.546	9.546	0.000	252814	20.0	9.56	
11 Tetraethylene Glycol						
10.385	10.385	0.000	306005	40.0	11.5	

### QC Flag Legend

Processing Flags

Reagents:

SG\_Gly\_CAL\_00053

Amount Added: 10.00

Units: uL

SG\_GLY\_ISTD\_00127

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10026.D

Injection Date: 10-Aug-2023 23:09:52

Instrument ID: CVGG2

Operator ID:

Lims ID: ccv I4

Worklist Smp#: 26

Client ID:

Injection Vol: 1.0 ul

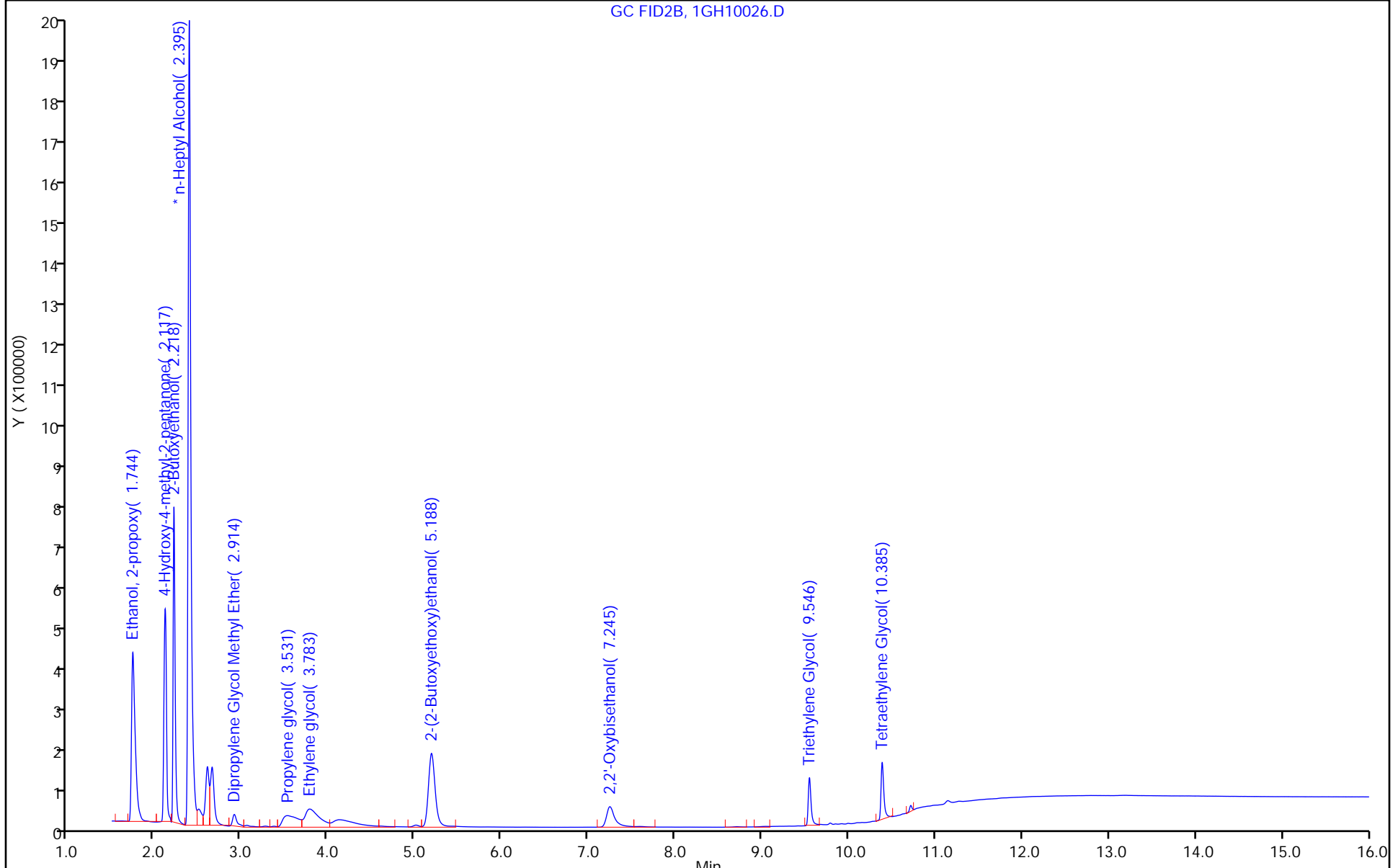
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 680-792737/9  
 Matrix: Water Lab File ID: 1GH10009.D  
 Analysis Method: 8015C GLY Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 08/10/2023 14:20  
 Con. Extract Vol.: 1(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 792737 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	3.0	U M	5.0	3.0	1.1

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10009.D  
 Lims ID: mb  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 10-Aug-2023 14:20:07 ALS Bottle#: 0 Worklist Smp#: 9  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0088172-009  
 Operator ID: Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 10-Aug-2023 23:22:06 Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1650

First Level Reviewer: AR8P Date: 10-Aug-2023 21:35:47

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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\* 4 n-Heptyl Alcohol  
 2.389 2.405 -0.016 4856997 50.0 50.0  
 7 Ethylene glycol  
 3.782 3.788 -0.006 7568 1.24  
 9 2,2'-Oxybisethanol 7  
 7.255 7.243 0.012 10064 0.2889 7  
 LOD = 1.60

**QC Flag Legend**

Processing Flags

7 - Failed Limit of Detection

**Reagents:**

SG\_GLY\_ISTD\_00127 Amount Added: 10.00 Units: uL Run Reagent



Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10009.D

Injection Date: 10-Aug-2023 14:20:07

Instrument ID: CVGG2

Operator ID:

Lims ID: mb

Worklist Smp#: 9

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

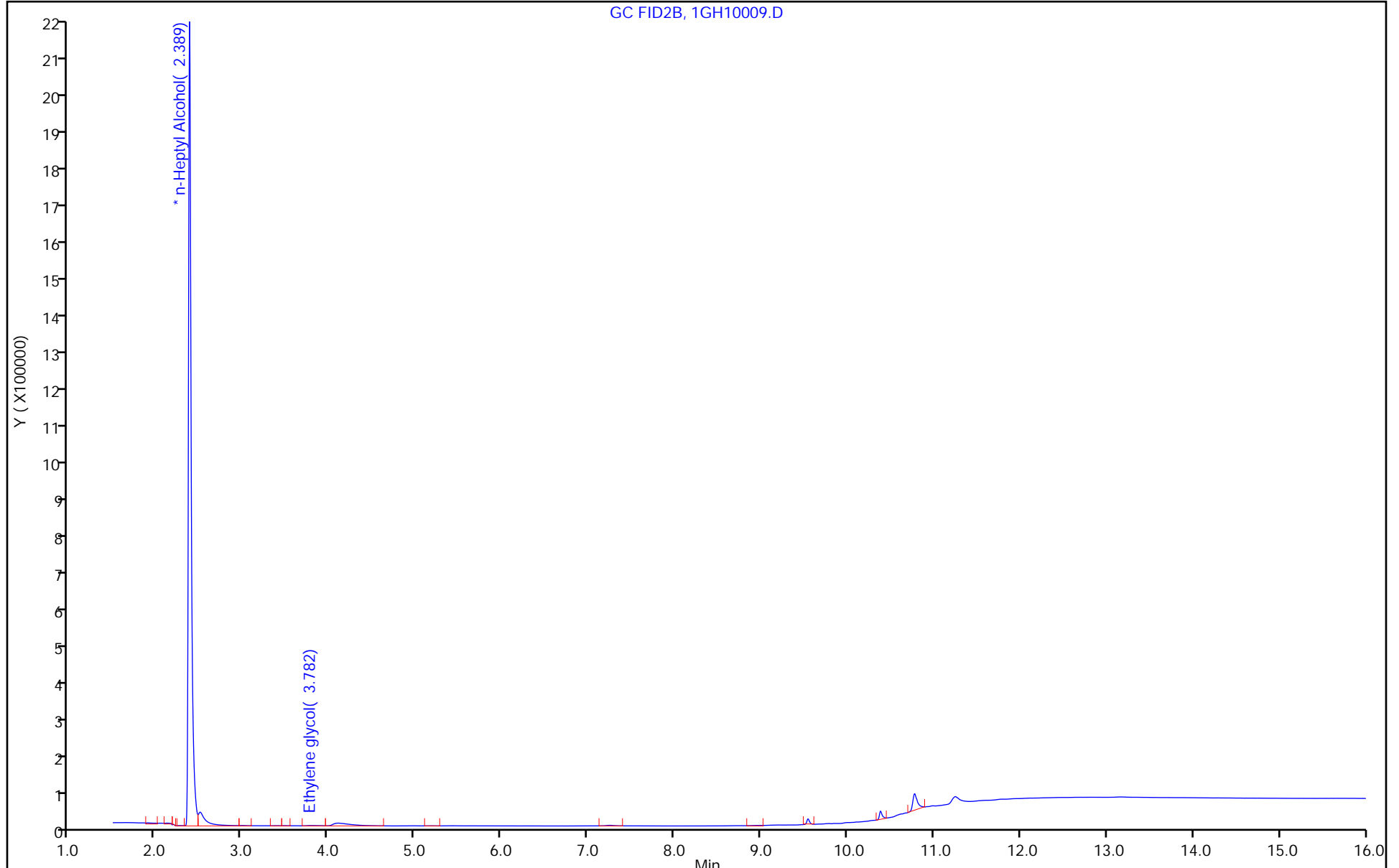
ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1GH10009.D



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 680-792737/5  
 Matrix: Water Lab File ID: 1GH10005.D  
 Analysis Method: 8015C GLY Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 08/10/2023 12:47  
 Con. Extract Vol.: 1(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 792737 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	19.6		5.0	3.0	1.1

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10005.D  
 Lims ID: lcs  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 10-Aug-2023 12:47:52 ALS Bottle#: 0 Worklist Smp#: 5  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0088172-005  
 Operator ID: Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 10-Aug-2023 23:22:05 Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1650

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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1 Ethanol, 2-propoxy	1.755	1.755	0.000	885198	20.0	22.0
2 4-Hydroxy-4-methyl-2-pentanone	2.122	2.122	0.000	786193	20.0	19.2
3 2-Butoxyethanol	2.224	2.224	0.000	871618	20.0	20.1
* 4 n-Heptyl Alcohol	2.404	2.404	0.000	3539575	50.0	50.0
5 Dipropylene Glycol Methyl Ether	2.918	2.918	0.000	68906	20.0	20.4
6 Propylene glycol	3.516	3.516	0.000	232080	20.0	16.1
7 Ethylene glycol	3.782	3.782	0.000	391968	20.0	15.3
8 2-(2-Butoxyethoxy)ethanol	5.193	5.193	0.000	679281	20.0	19.6
9 2,2'-Oxybisethanol	7.242	7.242	0.000	267596	20.0	14.4
10 Triethylene Glycol	9.546	9.546	0.000	277812	20.0	13.3
11 Tetraethylene Glycol	10.390	10.390	0.000	543949	40.0	31.0

## Reagents:

SG\_Gly\_CAL\_00053 Amount Added: 10.00 Units: uL  
 SG\_GLY\_ISTD\_00127 Amount Added: 10.00 Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10005.D

Injection Date: 10-Aug-2023 12:47:52

Instrument ID: CVGG2

Operator ID:

Lims ID: lcs

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

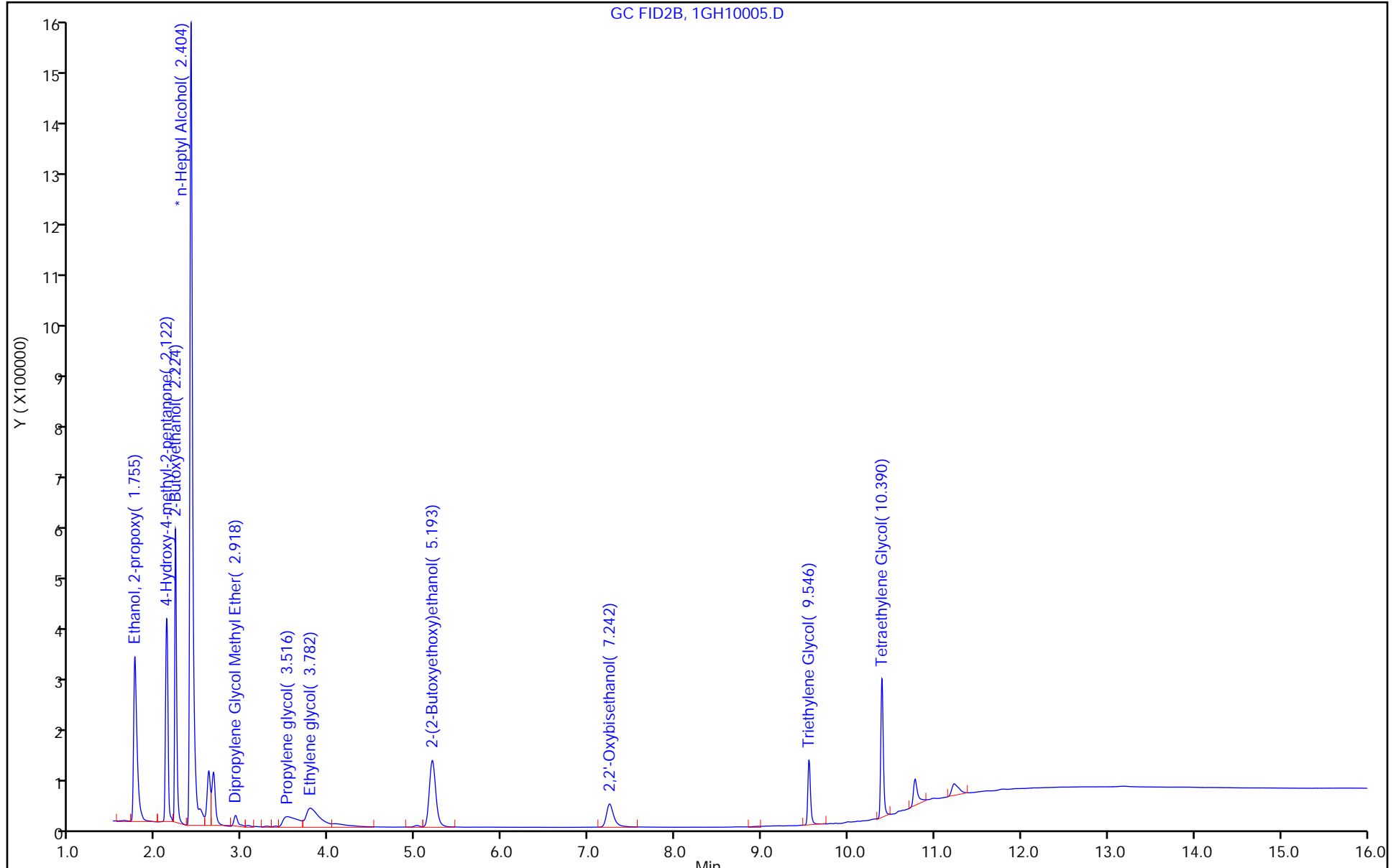
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCSD 680-792737/6  
 Matrix: Water Lab File ID: 1GH10006.D  
 Analysis Method: 8015C GLY Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 08/10/2023 13:10  
 Con. Extract Vol.: 1(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 792737 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	21.2		5.0	3.0	1.1

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10006.D  
 Lims ID: lcsd  
 Client ID:  
 Sample Type: LCSD  
 Inject. Date: 10-Aug-2023 13:10:56 ALS Bottle#: 0 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0088172-006  
 Operator ID: Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 10-Aug-2023 23:22:05 Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1650

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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1 Ethanol, 2-propoxy	1.751	1.751	0.000	1052214	20.0	22.4
2 4-Hydroxy-4-methyl-2-pentanone	2.120	2.120	0.000	931984	20.0	19.5
3 2-Butoxyethanol	2.221	2.221	0.000	1044838	20.0	20.7
* 4 n-Heptyl Alcohol	2.400	2.400	0.000	4128287	50.0	50.0
5 Dipropylene Glycol Methyl Ether	2.916	2.916	0.000	84227	20.0	21.5
6 Propylene glycol	3.507	3.507	0.000	298820	20.0	17.9
7 Ethylene glycol	3.778	3.778	0.000	608557	20.0	20.4
8 2-(2-Butoxyethoxy)ethanol	5.192	5.192	0.000	848956	20.0	21.2
9 2,2'-Oxybisethanol	7.242	7.242	0.000	367974	20.0	17.1
10 Triethylene Glycol	9.546	9.546	0.000	339811	20.0	14.1
11 Tetraethylene Glycol	10.386	10.386	0.000	754297	40.0	38.0

## Reagents:

SG\_Gly\_CAL\_00053 Amount Added: 10.00 Units: uL  
 SG\_GLY\_ISTD\_00127 Amount Added: 10.00 Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10006.D

Injection Date: 10-Aug-2023 13:10:56

Instrument ID: CVGG2

Operator ID:

Lims ID: lcsd

Worklist Smp#: 6

Client ID:

Injection Vol: 1.0 ul

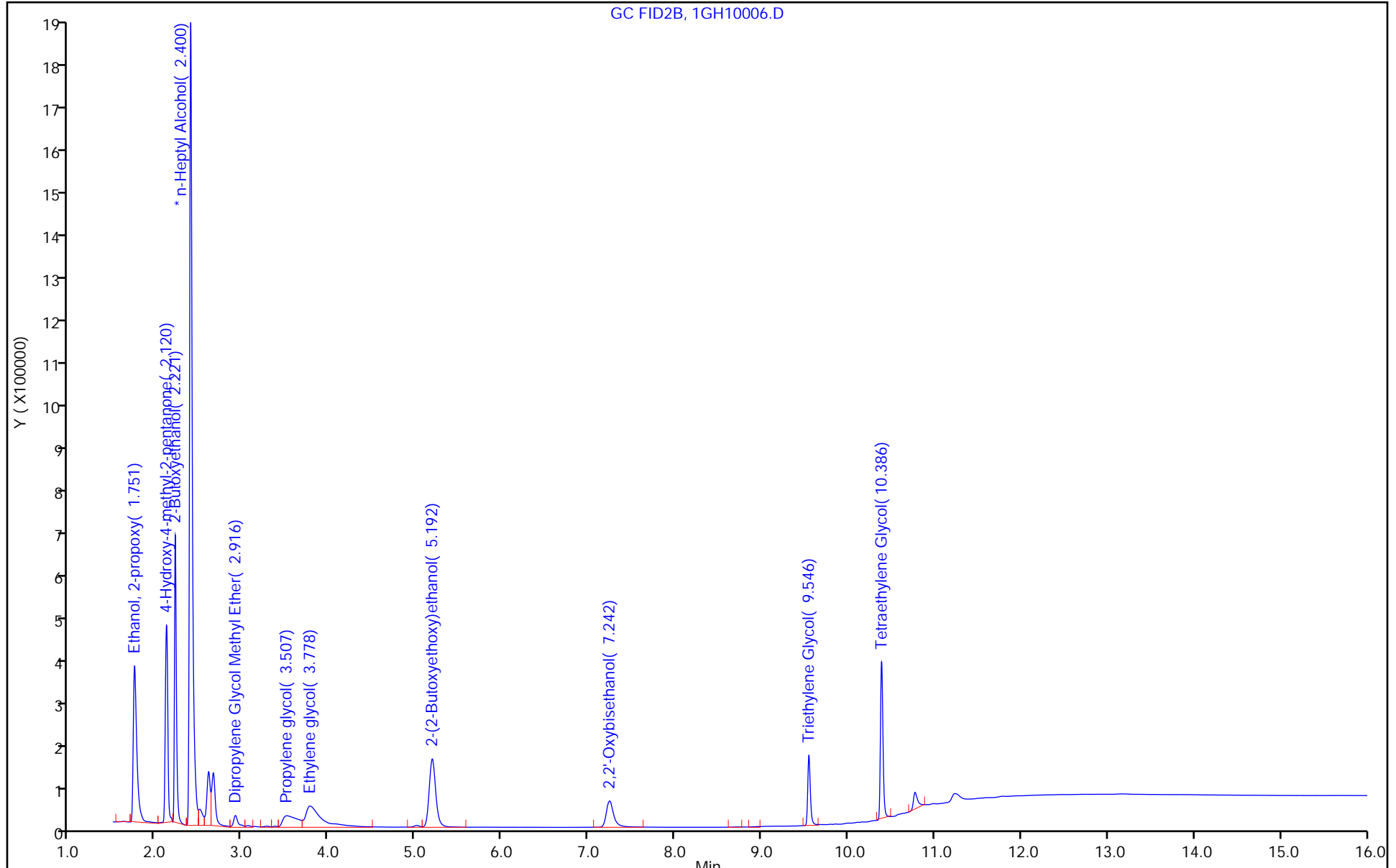
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AF-RHMW16-WGN01LF-2308 MS Lab Sample ID: 580-130241-6 MS  
 Matrix: Water Lab File ID: 1GH10023.D  
 Analysis Method: 8015C GLY Date Collected: 08/03/2023 11:25  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 08/10/2023 22:00  
 Con. Extract Vol.: 1(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 792737 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	23.1		5.0	3.0	1.1



Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10023.D  
 Lims ID: 580-130241-B-6 MS  
 Client ID:  
 Sample Type: MS  
 Inject. Date: 10-Aug-2023 22:00:46 ALS Bottle#: 0 Worklist Smp#: 23  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0088172-023  
 Operator ID: Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 10-Aug-2023 23:22:06 Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1650

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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1 Ethanol, 2-propoxy	1.744	1.756	-0.012	1140407	20.0	25.1
2 4-Hydroxy-4-methyl-2-pentanone	2.115	2.125	-0.010	1066665	20.0	23.3
3 2-Butoxyethanol	2.217	2.225	-0.008	1118782	20.0	22.8
* 4 n-Heptyl Alcohol	2.396	2.405	-0.009	4042416	50.0	50.0
5 Dipropylene Glycol Methyl Ether	2.911	2.920	-0.009	77990	20.0	20.2
7 Ethylene glycol	3.790	3.788	0.002	776888	20.0	26.8
8 2-(2-Butoxyethoxy)ethanol	5.190	5.193	-0.003	898537	20.0	23.1
9 2,2'-Oxybisethanol	7.259	7.243	0.016	363252	20.0	17.3
10 Triethylene Glycol	9.552	9.548	0.004	185102	20.0	6.78
11 Tetraethylene Glycol	10.397	10.387	0.010	116350	40.0	0.9125 7
LOD =	4.50					

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

SG\_Gly\_CAL\_00053 Amount Added: 10.00 Units: uL  
 SG\_GLY\_ISTD\_00127 Amount Added: 10.00 Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10023.D

Injection Date: 10-Aug-2023 22:00:46

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-130241-B-6 MS

Worklist Smp#: 23

Client ID:

Injection Vol: 1.0 ul

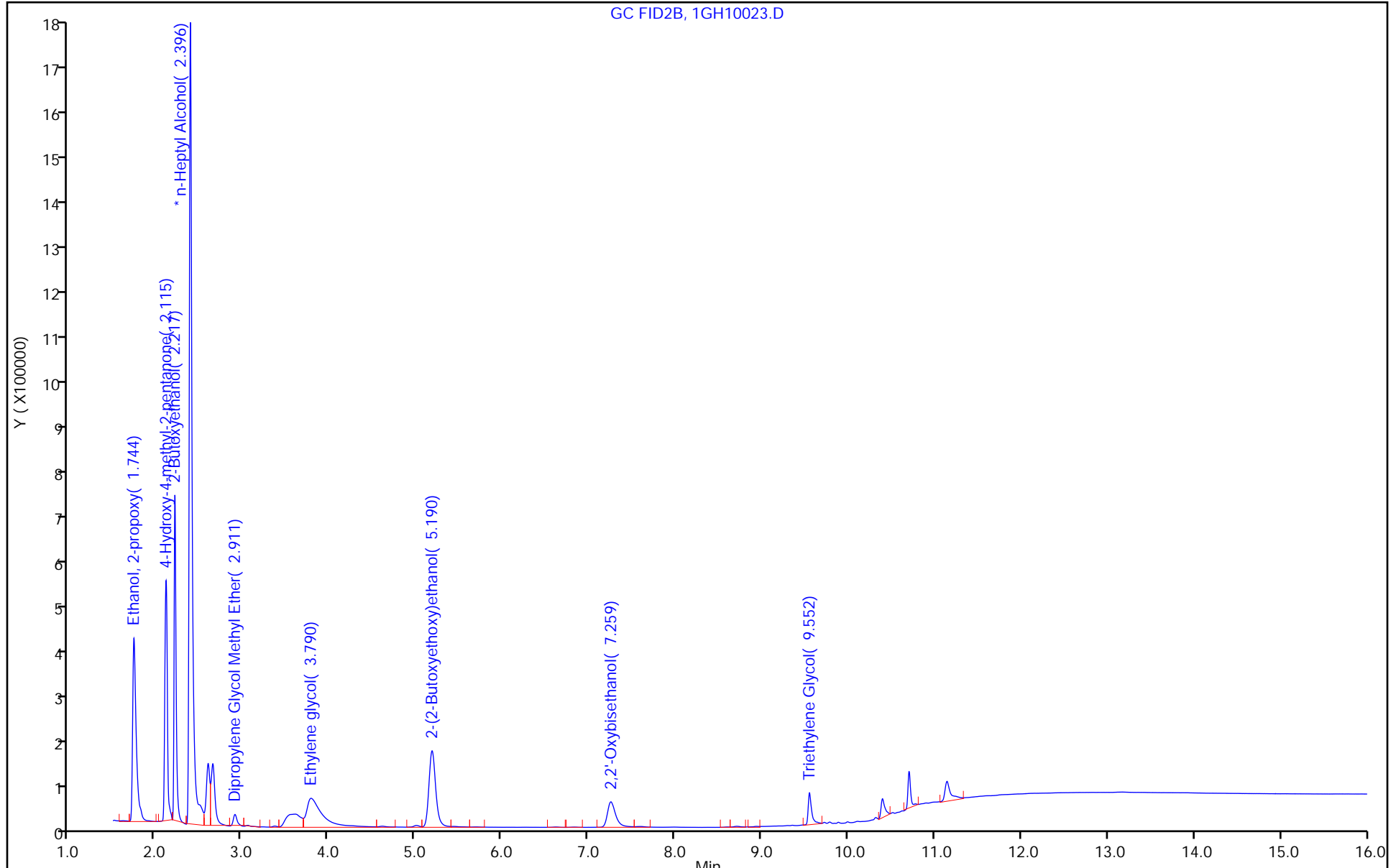
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-130241-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: AF-RHMW16-WGN01LF-2308 Lab Sample ID: 580-130241-6 MSD  
MSD  
Matrix: Water Lab File ID: 1GH10024.D  
Analysis Method: 8015C GLY Date Collected: 08/03/2023 11:25  
Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
Sample wt/vol: 1(mL) Date Analyzed: 08/10/2023 22:23  
Con. Extract Vol.: 1(mL) Dilution Factor: 1  
Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)  
% Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
Cleanup Factor: \_\_\_\_\_  
Analysis Batch No.: 792737 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	25.1		5.0	3.0	1.1

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10024.D  
 Lims ID: 580-130241-B-6 MSD  
 Client ID:  
 Sample Type: MSD  
 Inject. Date: 10-Aug-2023 22:23:45 ALS Bottle#: 0 Worklist Smp#: 24  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0088172-024  
 Operator ID: Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 10-Aug-2023 23:22:06 Calib Date: 13-Jul-2023 14:38:41  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230713-87436.b\1GG12010.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1650

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
--------------	------------------	------------------	----------	------------------	--------------------	-------

1 Ethanol, 2-propoxy	1.744	1.756	-0.012	1112741	20.0	28.1
2 4-Hydroxy-4-methyl-2-pentanone	2.118	2.125	-0.007	1065097	20.0	26.8
3 2-Butoxyethanol	2.217	2.225	-0.008	1064834	20.0	24.7
* 4 n-Heptyl Alcohol	2.393	2.405	-0.012	3568585	50.0	50.0
5 Dipropylene Glycol Methyl Ether	2.914	2.920	-0.006	76193	20.0	22.7
7 Ethylene glycol	3.792	3.788	0.004	740099	20.0	29.1
8 2-(2-Butoxyethoxy)ethanol	5.190	5.193	-0.003	853442	20.0	25.1
9 2,2'-Oxybisethanol	7.260	7.243	0.017	350348	20.0	19.0
10 Triethylene Glycol	9.552	9.548	0.004	225425	20.0	10.2
11 Tetraethylene Glycol	10.398	10.387	0.011	145935	40.0	3.83 7
LOD =	4.50					

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

SG\_Gly\_CAL\_00053 Amount Added: 10.00 Units: uL  
 SG\_GLY\_ISTD\_00127 Amount Added: 10.00 Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230810-88172.b\1GH10024.D

Injection Date: 10-Aug-2023 22:23:45

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-130241-B-6 MSD

Worklist Smp#: 24

Client ID:

Injection Vol: 1.0 ul

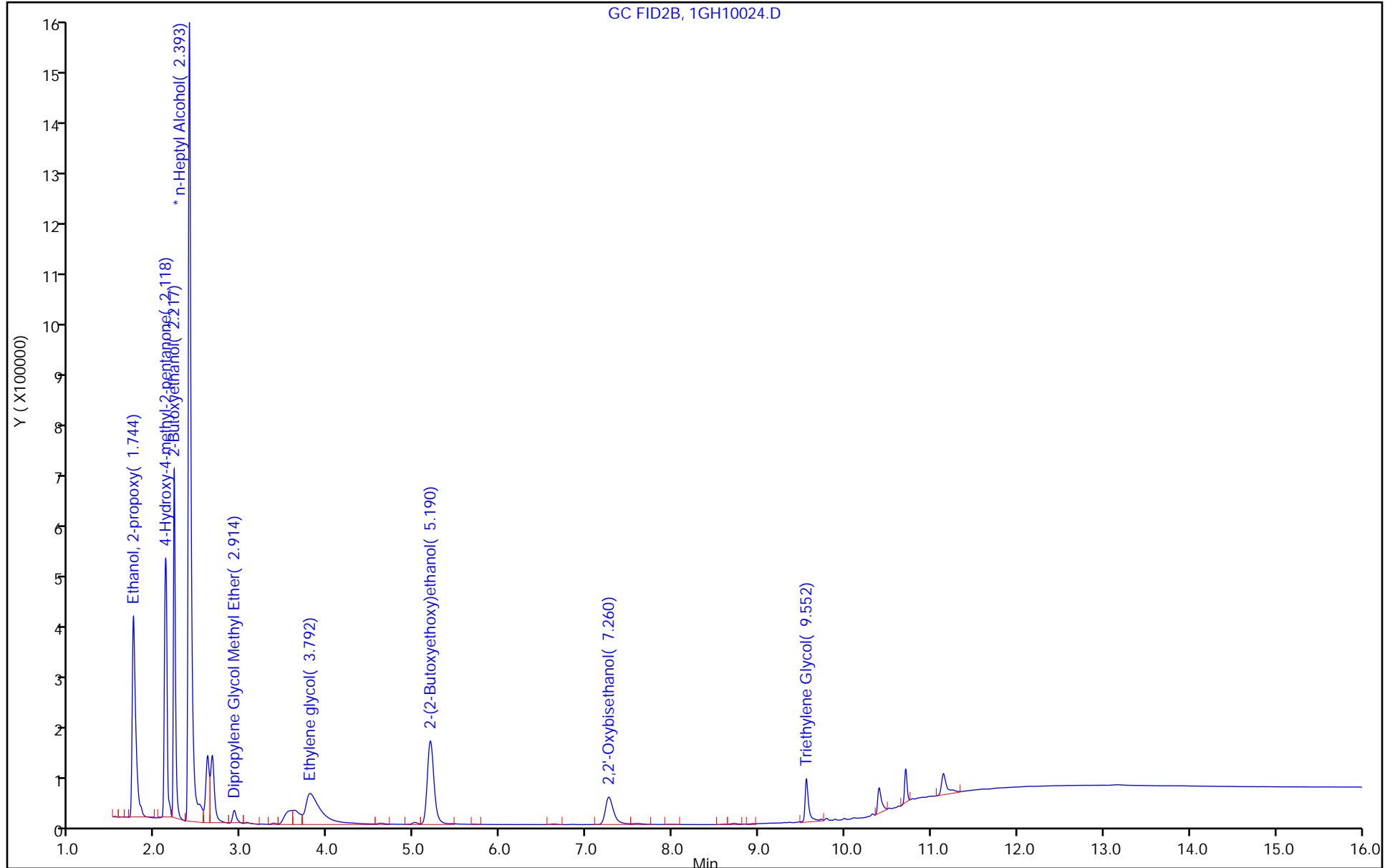
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-130241-1

SDG No.: \_\_\_\_\_

Instrument ID: CVGG2 Start Date: 07/13/2023 12:19

Analysis Batch Number: 788122 End Date: 07/13/2023 15:01

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 680-788122/4		07/13/2023 12:19	1	1GG12004.D	J&W DB WAX 0.45 (mm)
IC 680-788122/5		07/13/2023 12:42	1	1GG12005.D	J&W DB WAX 0.45 (mm)
IC 680-788122/6		07/13/2023 13:05	1	1GG12006.D	J&W DB WAX 0.45 (mm)
ICIS 680-788122/7		07/13/2023 13:29	1	1GG12007.D	J&W DB WAX 0.45 (mm)
IC 680-788122/8		07/13/2023 13:52	1	1GG12008.D	J&W DB WAX 0.45 (mm)
IC 680-788122/9		07/13/2023 14:15	1	1GG12009.D	J&W DB WAX 0.45 (mm)
IC 680-788122/10		07/13/2023 14:38	1	1GG12010.D	J&W DB WAX 0.45 (mm)
ICV 680-788122/11 CCV		07/13/2023 15:01	1	1GG12011.D	J&W DB WAX 0.45 (mm)

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-130241-1

SDG No.: \_\_\_\_\_

Instrument ID: CVGG2 Start Date: 08/10/2023 12:24

Analysis Batch Number: 792737 End Date: 08/10/2023 23:09

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 680-792737/4		08/10/2023 12:24	1	1GH10004.D	J&W DB WAX 0.45 (mm)
LCS 680-792737/5		08/10/2023 12:47	1	1GH10005.D	J&W DB WAX 0.45 (mm)
LCSD 680-792737/6		08/10/2023 13:10	1	1GH10006.D	J&W DB WAX 0.45 (mm)
MB 680-792737/9		08/10/2023 14:20	1	1GH10009.D	J&W DB WAX 0.45 (mm)
ZZZZZ		08/10/2023 18:10	1		J&W DB WAX 0.45 (mm)
580-130241-1	AF-RHMW02-WGN01LF-2308	08/10/2023 18:56	1	1GH10015.D	J&W DB WAX 0.45 (mm)
580-130241-2	AF-RHMW02-WGFD01LF-2308	08/10/2023 19:19	1	1GH10016.D	J&W DB WAX 0.45 (mm)
580-130241-3	AF-RHMW03-WGN01LF-2308	08/10/2023 19:42	1	1GH10017.D	J&W DB WAX 0.45 (mm)
580-130241-4	AF-RHMW12A-WGN01LF-2308	08/10/2023 20:05	1	1GH10018.D	J&W DB WAX 0.45 (mm)
580-130241-5	AF-RHMW12A-WGFD01LF-2308	08/10/2023 20:28	1	1GH10019.D	J&W DB WAX 0.45 (mm)
580-130241-6	AF-RHMW16-WGN01LF-2308	08/10/2023 20:51	1	1GH10020.D	J&W DB WAX 0.45 (mm)
580-130241-6 MS	AF-RHMW16-WGN01LF-2308 MS	08/10/2023 22:00	1	1GH10023.D	J&W DB WAX 0.45 (mm)
580-130241-6 MSD	AF-RHMW16-WGN01LF-2308 MSD	08/10/2023 22:23	1	1GH10024.D	J&W DB WAX 0.45 (mm)
CCV 680-792737/26		08/10/2023 23:09	1	1GH10026.D	J&W DB WAX 0.45 (mm)

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah Job No.: 580-130241-1

SDG No.: \_\_\_\_\_

Batch Number: 788122 Batch Start Date: 07/13/23 12:19 Batch Analyst: Mullis, David B

Batch Method: 8015C GLY Batch End Date: \_\_\_\_\_

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	SG_Gly_CAL 00053	SG_GLY_ISTD 00124	SG_GlyICV 00061		
IC 680-788122/4		8015C GLY		1 mL	50 uL	10 uL			
IC 680-788122/5		8015C GLY		1 mL	40 uL	10 uL			
IC 680-788122/6		8015C GLY		1 mL	25 uL	10 uL			
ICIS 680-788122/7		8015C GLY		1 mL	10 uL	10 uL			
IC 680-788122/8		8015C GLY		1 mL	5 uL	10 uL			
IC 680-788122/9		8015C GLY		1 mL	2.5 uL	10 uL			
IC 680-788122/10		8015C GLY		1 mL	1 uL	10 uL			
ICV 680-788122/11 CCV		8015C GLY		1 mL		10 uL	10 uL		

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.



GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah Job No.: 580-130241-1

SDG No.: \_\_\_\_\_

Batch Number: 792737 Batch Start Date: 08/10/23 12:24 Batch Analyst: Mullis, David B

Batch Method: 8015C GLY Batch End Date: \_\_\_\_\_

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	SG_Gly_CAL 00053	SG_GLY_ISTD 00127			
CCVIS 680-792737/4		8015C GLY		1 mL	10 uL	10 uL			
LCS 680-792737/5		8015C GLY		1 mL	10 uL	10 uL			
LCSD 680-792737/6		8015C GLY		1 mL	10 uL	10 uL			
MB 680-792737/9		8015C GLY		1 mL		10 uL			
580-130241-A-1	AF-RHMW02-WGN01L F-2308	8015C GLY	T	1 mL		10 uL			
580-130241-C-2	AF-RHMW02-WGFD01 LF-2308	8015C GLY	T	1 mL		10 uL			
580-130241-B-3	AF-RHMW03-WGN01L F-2308	8015C GLY	T	1 mL		10 uL			
580-130241-C-4	AF-RHMW12A-WGN01 LF-2308	8015C GLY	T	1 mL		10 uL			
580-130241-B-5	AF-RHMW12A-WGFD0 1LF-2308	8015C GLY	T	1 mL		10 uL			
580-130241-B-6	AF-RHMW16-WGN01L F-2308	8015C GLY	T	1 mL		10 uL			
580-130241-B-6 MS	AF-RHMW16-WGN01L F-2308	8015C GLY	T	1 mL	10 uL	10 uL			
580-130241-B-6 MSD	AF-RHMW16-WGN01L F-2308	8015C GLY	T	1 mL	10 uL	10 uL			
CCV 680-792737/26		8015C GLY		1 mL	10 uL	10 uL			

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# Subcontract Data

# Shipping and Receiving Documents

**Chain of Custody Record**



Method AWB: 010-78418524

<b>Client Information</b>		Sampler: <b>Mat Yim</b>		Lab PM: <b>Elaine Walker</b>		Carrier Tracking No(s):	
Client Contact: <b>AECOM</b>		Phone: <b>808-349-4738</b>		E-Mail: <b>M.Elaine.Walker@EurofinsET.com</b>		FedEx State of Origin: <b>Hawaii</b>	
Company: <b>AECOM</b>		Due Date Requested: <b>See subcontract</b>		Analysis Requested		GOC No: <b>2308AFEA01</b>	
Address: <b>1001 Bishop St. Suite 1600</b>		TAT Requested (days): <b>Rush - 5 Day</b>		Field Filtered Sample (Yes or No)		Page: <b>Page 1 of 1</b>	
City: <b>Honolulu</b>		Compliance Project: <b>Δ Yes Δ No</b>		Perform MS/MSD (Yes or No)		Lab #:	
State, Zip: <b>Hawaii 96813</b>		Project #: <b>60697810</b>		8015C_DAI_GL_DS/2-(2-butoxyethoxy)-ethanol		Preservation Codes:	
Phone: <b>808-954-4512 / 770-331-0794</b>		WO #:		Total Number of containers		A - HCL	
Email: <b>Watson_Tanjil (watson.tanjil@aecom.com) / Mark Kromis (mark.kromis@aecom.com)</b>		Project #:		3		B - NaOH	
Project Name: <b>CTO N6274229F0104</b>		SSOW #:		3		C - Zn Acetate	
Site: <b>RHSF</b>		Sample Identification		Special Instructions/Note:		D - Nitric Acid	
		AF-RHMMW02-WGN01LF-2308		580-130241 Chain of Custody		E - NaHSO4	
		AF-RHMMW02-WGFD01LF-2308				F - MeOH	
		Sample Date: <b>8/31/23</b>				G - Anchlor	
		Sample Time: <b>0935</b>				H - Ascorbic Acid	
		Sample Type: <b>G</b>				I - Ice	
		Matrix (Washer, Sealid, Osmastabil, Inertness Add)				J - DI Water	
		Preservation Code: <b>W</b>				K - EDTA	
		Sample Date: <b>8/31/23</b>				L - EDA	
		Sample Time: <b>0935</b>				M - Hexane	
		Sample Type: <b>G</b>				N - Nerep	
		Matrix (Washer, Sealid, Osmastabil, Inertness Add)				O - Acetic Acid	
		Preservation Code: <b>W</b>				P - Na2CO3	
		Sample Date: <b>8/31/23</b>				Q - Na2SO3	
		Sample Time: <b>0935</b>				R - Na2S2O3	
		Sample Type: <b>G</b>				S - H2SO4	
		Matrix (Washer, Sealid, Osmastabil, Inertness Add)				T - TSP Dodecahydrate	
		Preservation Code: <b>W</b>				U - Acetone	
		Sample Date: <b>8/31/23</b>				V - MCAA	
		Sample Time: <b>0935</b>				W - pH 4-5	
		Sample Type: <b>G</b>				X - other (specify)	
		Matrix (Washer, Sealid, Osmastabil, Inertness Add)					
		Preservation Code: <b>W</b>					
		Sample Date: <b>8/31/23</b>					
		Sample Time: <b>0935</b>					
		Sample Type: <b>G</b>					
		Matrix (Washer, Sealid, Osmastabil, Inertness Add)					
		Preservation Code: <b>W</b>					
		Sample Date: <b>8/31/23</b>					
		Sample Time: <b>0935</b>					
		Sample Type: <b>G</b>					
		Matrix (Washer, Sealid, Osmastabil, Inertness Add)					
		Preservation Code: <b>W</b>					
		Sample Date: <b>8/31/23</b>					
		Sample Time: <b>0935</b>					
		Sample Type: <b>G</b>					
		Matrix (Washer, Sealid, Osmastabil, Inertness Add)					
		Preservation Code: <b>W</b>					
		Sample Date: <b>8/31/23</b>					
		Sample Time: <b>0935</b>					
		Sample Type: <b>G</b>					
		Matrix (Washer, Sealid, Osmastabil, Inertness Add)					
		Preservation Code: <b>W</b>					
		Sample Date: <b>8/31/23</b>					
		Sample Time: <b>0935</b>					
		Sample Type: <b>G</b>					
		Matrix (Washer, Sealid, Osmastabil, Inertness Add)					
		Preservation Code: <b>W</b>					
		Sample Date: <b>8/31/23</b>					
		Sample Time: <b>0935</b>					
		Sample Type: <b>G</b>					
		Matrix (Washer, Sealid, Osmastabil, Inertness Add)					
		Preservation Code: <b>W</b>					
		Sample Date: <b>8/31/23</b>					
		Sample Time: <b>0935</b>					
		Sample Type: <b>G</b>					
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		Preservation Code: <b>W</b>					
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		Sample Time: <b>0935</b>					
		Sample Type: <b>G</b>					
		Matrix (Washer, Sealid, Osmastabil, Inertness Add)					
		Preservation Code: <b>W</b>					
		Sample Date					

**Chain of Custody Record**

United AMP. 016-18418524



<b>Client Information</b>		Sampler: Matt Yim Phone: 808-349-4438	Lab P/N: Elaine Walker E-Mail: M.Elaine.Walker@EurofinsET.com	Carrier Tracking No(s): FedEx State of Origin: Hawaii	COCC No: 2308AHEA02 Page: Page 1 of 1						
Company: AECOM		PW/SID:		Job #:							
Address: 1001 Bishop St. Suite 1600 City: Honolulu State, Zip: Hawaii 96813		Due Date Requested: See subcontract TAT Requested (days): Rush - 5 Day		Analysis Requested							
Phone: 808-954-4512 / 770-331-0794		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		Preservation Codes:							
Email: Watson_Tanj (watson.tanj@aecom.com) / Mark Kronis (mark.kronis@aecom.com)		WO #:		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:							
Project Name: CTO N6274223F0104		Project #: 60697810		M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)							
Site: HH5F		SSOW #:		Special Instructions/Note:							
<b>Sample Identification</b>		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Sediment, Swab, Soil, Bacteria, Ash)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015C_DAI_GL_DS/2-(2-butoxyethoxy)-ethanol	Total Number of containers	3	
AF-RH/MW03-WGN01F-2308		8/3/23	1120	G	W	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
<b>Possible Hazard Identification</b>		Prelim data (Level 1 or 2)=see TAT above. DOD Stage 4 report standard IAT. AECOM EQUIS EDD.		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client		Disposal By Lab		Archive For _____ Months	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Date:		Date:		Date:		Date:		Date:	
Relinquished by: Matt Yim		Date/Time: 8/3/23 1230		Company: AECOM		Received by: Brittany Tommez		Date/Time: 8/4/23 1500		Company: AECOM	
Relinquished by: Brittany Tommez		Date/Time: 8/3/23 1300		Company: AECOM		Received by: [Signature]		Date/Time: 8/4/23 1500		Company: AECOM	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		5.2/5.3					



Unlabeled AWB: 016-78418524



<b>Client Information</b>		Sampler: <u>Maraela Gascho</u>		Lab #/M: <u>Elaine Walker</u>		Carrier Tracking No(s):		COG No: <u>2908AFEA05</u>	
Client Contact: _____		Phone: <u>828-521-3057</u>		E-Mail: <u>M.Elaine.Walker@EurofinsET.com</u>		State of Origin: <u>Hawaii</u>		Page: <u>Page 1 of 1</u>	
Company: <u>AECOM</u>		PWSID: _____		Analysis Requested		Job #:		Preservation Codes:	
Address: <u>1001 Bishop St. Suite 1600</u>		Due Date Requested: _____		see sub/contract		TAT Requested (days):		<input type="checkbox"/> A - HCL <input type="checkbox"/> B - NaOH <input type="checkbox"/> C - Zn Acetate <input type="checkbox"/> D - Nitric Acid <input type="checkbox"/> E - Nitric Acid <input type="checkbox"/> F - Meth <input type="checkbox"/> G - Amchlor <input type="checkbox"/> H - Ascorbic Acid <input type="checkbox"/> I - Ice <input type="checkbox"/> J - DI Water <input type="checkbox"/> K - EDTA <input type="checkbox"/> L - EDA <input type="checkbox"/> M - Hexane <input type="checkbox"/> N - None <input type="checkbox"/> O - AsNaO2 <input type="checkbox"/> P - Na2CO3 <input type="checkbox"/> Q - Na2SO3 <input type="checkbox"/> R - Na2S2O3 <input type="checkbox"/> S - H2SO4 <input type="checkbox"/> T - TSP Dodecahydrate <input type="checkbox"/> U - Acetone <input type="checkbox"/> V - MCAA <input type="checkbox"/> W - pH 4.5 <input type="checkbox"/> Z - other (Specify)	
City: <u>Honolulu</u>		TAT Requested (days):		<u>Rush - 5 Day</u>		Compliance Project: <input type="checkbox"/> A Yes <input type="checkbox"/> A No		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: <input type="checkbox"/> I, <input type="checkbox"/> II, <input type="checkbox"/> III, <input type="checkbox"/> IV, Other (specify) _____ Prelim data (Level for 2)=see TAT above. DOD Stage 4 report standard TAT. AECOM EQUIS EDD.	
State, Zip: <u>Hawaii 96813</u>		Project #:		<u>WO #:</u>		Project #:		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Phone: <u>808-954-4512 / 770-331-0794</u>		Project #:		<u>WO #:</u>		Project #:		Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological	
Email: <u>Watson_Tanjil (watson.tanjil@aecom.com) / Mark Kromis (mark.kromis@aecom.com)</u>		Project #:		<u>WO #:</u>		Project #:		Sample Identification	
Project Name: <u>CTO N6274223F0104</u>		Project #:		<u>WO #:</u>		Project #:		AF-RHMMW12A-WGN01L-F-2308 <u>8/3/23 0930 G W N N X 3</u>	
Site: <u>RHSF</u>		SSOW#:		SSOW#:		SSOW#:		AF-RHMMW12A-WGN01L-F-2308 <u>8/3/23 0930 G W N N X 3</u>	
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		8015C_DAI_GL_D5/2-(2-butoxyethoxy)-ethanol		Total Number of containers		Special Instructions/Note:	
X		X		X		X		AF-RHMMW12A-WGN01L-F-2308 <u>8/3/23 0930 G W N N X 3</u>	
AF-RHMMW12A-WGN01L-F-2308		8/3/23		0930		G		W	
AF-RHMMW12A-WGN01L-F-2308		8/3/23		0930		G		W	
AF-RHMMW12A-WGN01L-F-2308		8/3/23		0930		G		W	

5-2/53

**Eurofins FGS, Seattle**

5755 8th Street East  
Tacoma, WA 98424

**Chain of Custody Record**

Initiald AWD: 016-784185-24



Environment Testing  
America

<b>Client Information</b>		Sampler: <i>Marta Cascho</i>	Lab Pk: Elaine Walker	Carrier Tracking No(s): 2308AFE06	COG No: 2308AFE06
Client Contact: <i>808-521-3057</i>		Phone: <i>808-521-3057</i>	E-Mail: <a href="mailto:M.Elaine.Walker@EurofinsET.com">M.Elaine.Walker@EurofinsET.com</a>	State of Origin: Hawaii	Page: Page 1 of 1
Company: AECOM		Due Date Requested: See subContract		Analysis Requested	
Address: 1001 Bishop St. Suite 1600		City: Honolulu		TAT Requested (days): <b>Rush - 5 Day</b>	
State, Zip: Hawaii 96813		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		PO #:	
Phone: 808-954-4512 / 770-331-0794		WO #:		Project #:	
Email: Watson.Tamji (watson.tamji@aecom.com) / Mark.Kromis (mark.kromis@aecom.com)		Project #: 60697810		SSOW#:	
Site: RHSEF		Sample Date: <i>8/3/23</i>		Sample Time: <i>1125</i>	
Sample Identification: AF-RHMMW16-WGND1LF-2308		Sample Type (C=comp, G=grab)		Matrix (Water, Soil, Oil, Biotrans, Anal)	
		Preservation Code: G		W	
		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)	
		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N	
		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> X	
		8015C_DAI_GL_D5/2-(2-butoxyethoxy)-ethanol			
		Total Number of containers		3	
		Special Instructions/Note:			
		Preservation Codes:		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	

# Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-130241-1

**Login Number: 130241**  
**List Number: 1**  
**Creator: Johnson, Corey M**

**List Source: Eurofins Seattle**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-130241-1

**Login Number: 130241**  
**List Number: 2**  
**Creator: Johnson, Corey M**

**List Source: Eurofins Savannah**  
**List Creation: 08/10/23 03:07 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	